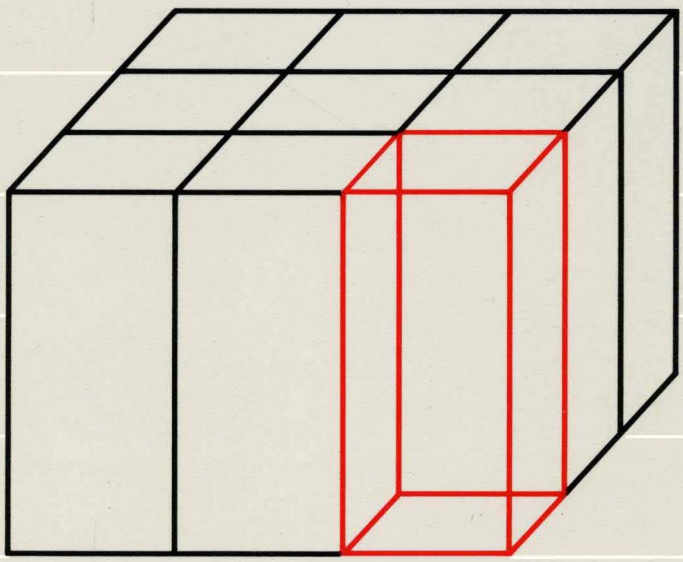
General Information

VSE/System Package



GC33-6176-0

General Information
VSE/System Package

Version 2 Release 1
Modification Level 0

Program Number 5666-316
Order Number GC33-6176-0
File Number S370/4300-20

First Edition (June 1984)

This edition applies to Version 2, Release 1, Modification Level 0 of VSE/System Package, Program Number 5666-316, and to all subsequent releases and modifications until otherwise indicated in new editions. Changes are made periodically to the information herein; before using this publication in connection with the operation of IBM systems, consult the latest *IBM System/370, 30XX and 4300 Processors Bibliography,* GC20-0001, for the editions that are applicable and current.

References in this publication to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM program product in this document is not intended to state or imply that only IBM's program product may be used. Any functionally equivalent program may be used instead.

In this manual are illustrations in which names are used. These names are fanciful and fictitious, created by the author; they are used solely for illustrative purposes and not for identification of any person or company.

Publications are not stocked at the addresses given below; requests for copies of IBM publications should be made to your IBM representative or to the IBM branch office serving your locality.

A form for readers' comments is provided at the back of this publication. If the form has been removed, comments may be addressed either to:

IBM Deutschland GmbH
Dept 3282
Schoenaicher Strasse 220
D-7030 Boeblingen, Federal Republic of Germany

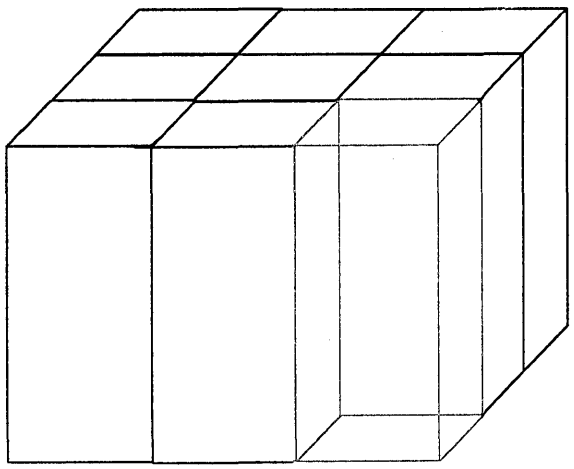
or to:

IBM Corporation
Dept 6R1/A3
180 Kost Road
Mechanicsburg, PA 17055, USA

IBM may use or distribute whatever information you supply in any way it believes appropriate without incurring any obligation to you.

© Copyright International Business Machines Corporation 1984

VSE/System Package? What is it?

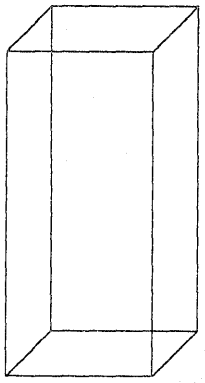


We think that it's many GOOD IDEAS!

To tell you about them, we'd like to answer some important questions you may have. . . .

Contents

1. Why should I have a data processing system with VSE/SP?



Because you can do so many things with it!

A Pregenerated, Full-Function System

The IBM licensed program VSE/SP (Virtual Storage Extended/System Package) is a pregenerated VSE system for IBM System/370 and 4300 processors. *It is a full-function VSE system, ready for use immediately after installation.*

Because it is pregenerated, VSE/SP solves many problems related to system planning and installation. Yet the benefits of having VSE/SP do not stop once installation is over. As the rest of this manual shows, the wide range of functions provided by VSE/SP help make daily use of your system easier and more productive. And this is true whether you are new to data processing or have previous experience.

Improvements to the IBM program products included in VSE/SP (its *component program products*) make important contributions to ease-of-use and productivity. Some of these improvements are:

- A new, simpler VSE librarian.
- Support for up to 40 megabytes of virtual addressable storage.
- Better job processing through conditional Job Control Language (JCL).

Programming developed especially for VSE/SP also plays a large part in system productivity. VSE/SP's *Interactive Interface* unifies the various functions of the component program products and enables users to work more easily with them. Because of the Interactive Interface, most of your system personnel can do their work without being concerned about system internals.

An Adaptable System to Meet Your Needs

It is important to remember that pregeneration does *not* mean that all VSE/SP systems must look the same and be used the same. VSE/SP gives you freedom in creating hardware and software configurations that meet your particular needs. You can install additional software, for example, or tailor the predefined Interactive Interface. You also can operate your system in one of several user environments:

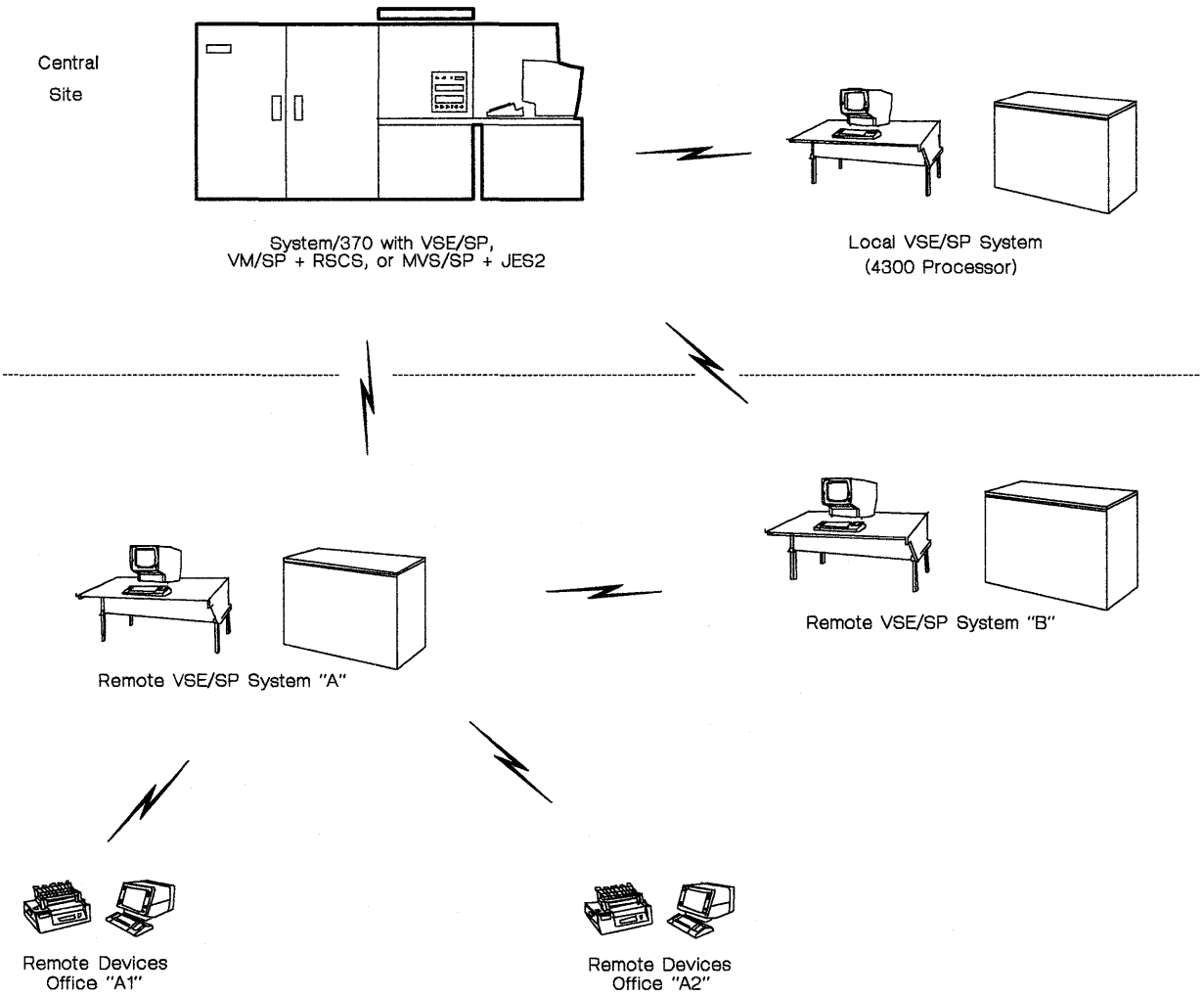
- As an independent system with just local devices.
- As an independent system with both local and remote devices.
- As part of a communications network with two or more processors.

With VSE/SP, therefore, you can have a data processing system that *fits the kind of work that you want to do*. To briefly illustrate this, the inside of this foldout looks at a fictional company called Smith Insurance. For some years, management at Smith Insurance has considered installing a data processing system to automate claims processing and policy updating. Yet until now, they have kept doing business the old way, with lots of paper and manual labor.

Sample Networking Environment

In a communications network, VSE/SP supports connections to other VSE-based systems, systems with VM/SP (Virtual Machine/System Product), and systems with MVS/SP (Multiple Virtual Storage/System Product).

The following figure is a simplified example of a networking environment for a business like Smith Insurance. Note that a local VSE/SP system is at the central site. With it, central site personnel develop and test applications for the two remote VSE/SP systems. Also note that the two remote VSE/SP systems can operate in their own *peer-to-peer* communications network.



For more information about operating your system within a network, see the manual *VSE/SP Networking*, or contact your IBM representative.

Full Function in Any User Environment

Smith Insurance, which has several branch offices, is affiliated with an insurance corporation in another city. Management at Smith Insurance knows about the large IBM System/370 at corporate headquarters; but at this time, they have neither the capital nor the need to purchase such a large system. In addition, they do not have experienced data processing personnel to run it.

Installing a system with VSE/SP, however, could help solve these and other problems. This is because Smith Insurance could:

1. **Start "small."**

   Smith Insurance could install and use VSE/SP without investing in a large number of hardware devices. In fact, they could begin with a system configuration of about 10 devices, including the processor. If the agency's needs changed, they could gradually add hardware devices over a period of time. They also could install additional software (business applications or IBM program products, for example) whenever necessary.

2. **Install remote devices at branch offices.**

   The appendix "Supported Hardware Devices" (pp. 38 - 43) lists some of the communication devices and subsystems that can be used with VSE/SP. These include:

   - IBM display stations and terminal printers.

     Branch office employees could use remote display stations to work interactively with the system. Terminal printers would enable them to print information that appeared on their display stations.

   - IBM remote job entry (RJE) workstations and their attachable devices.

     Employees at remote workstations could create jobs and send them for processing at the VSE/SP system. Job output could be sent back to the workstations and printed there.

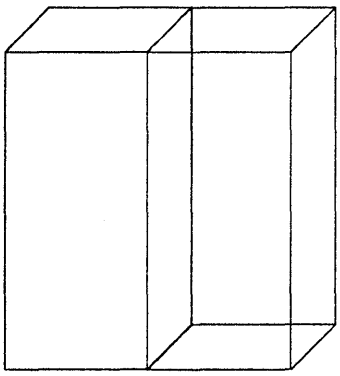
   - IBM Personal Computers.

     For some tasks, employees could work with the system from IBM Personal Computers just like they would from normal display stations. At other times, they could use these devices as "intelligent" workstations. That is, they could transfer files and data from main system storage to their IBM Personal Computer. Then they could work with the data, independent of the rest of the system. Updated data could be transferred back to main system storage whenever convenient.

3. **Link to the computer at corporate headquarters.**

   With this connection, Smith Insurance personnel could: (a) exchange data with the central system or other systems under its control and (b) use applications installed on these systems. They also could take advantage of experienced personnel at other systems. For example, central site personnel could sign on to the Smith Insurance system and operate or administer it.

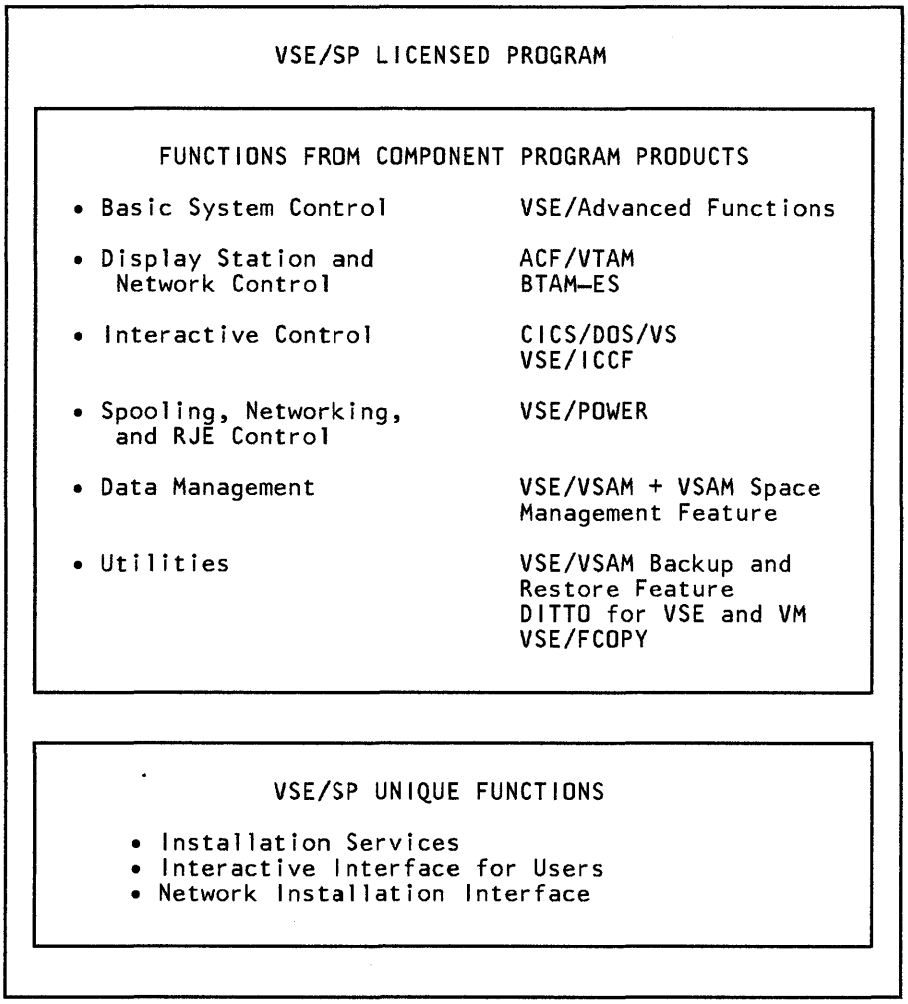
2. What is in the "package"?



To start with, it's a complete operating system!

VSE/SP is a complete system that has no prerequisite software. As shown in the figure below, it includes functions from several separate IBM program products, plus functions developed especially for it.

Note: For meanings of unfamiliar acronyms, see the "Glossary" (pp. 56 - 61).



All prerequisite System Control Programming also is shipped with VSE/SP. This includes System Control Programming for BTAM-ES, Device Support Facilities, EREP, and VSE/OLTEP.

The inside of this foldout has more information about the functions provided by VSE/SP. The appendix "Related Publications" (pp. 50 - 55) lists general publications for VSE/SP's component program products. It also shows the version and release level used for each.

OPEN HERE

VSE/VSAM

VSE/VSAM is a data access method designed for use with disk devices like the IBM 3370 or IBM 3380. VSE/SP uses VSE/VSAM to organize and access data in both system and user libraries and files.

Note: Security and audit functions of the above program products are included in VSE/SP. Your data processing staff is responsible for evaluating and implementing these functions.

Functions Developed for VSE/SP

VSE/SP also provides functions that have been developed especially for it. These include support for:

- Installation of VSE/SP and optional programs.
- Day-to-day system use and operation.
- Online problem determination.
- Network installation and operation.

For more information about these functions, see pages 13 - 32.

Using the VSE/SP Generation Feature

When you order VSE/SP, IBM ships you two distribution tapes. These two tapes contain the complete VSE/SP system, which is mainly in object code.

VSE/SP is pregenerated to meet your functional needs. But if you wish, you can change your pregenerated VSE/SP system at any time by ordering the Generation Feature. This feature supplies: (a) source and object code for CICS/DOS/VS and (b) source code for the supervisor control program of ACF/Advanced Functions. With it, you can change CICS/DOS/VS or the predefined supervisor control program to meet your particular needs.

The Generation Feature is shipped on a separate distribution tape. You install it on your pregenerated system using a VSE/SP dialog. You do not need to do a second initial installation of your entire system.

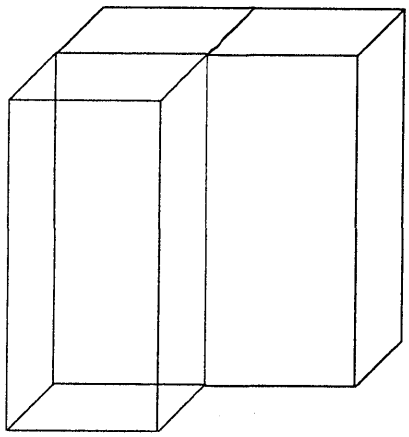
For information about how to install and service both VSE/SP and the Generation Feature, see the manuals *VSE/SP Planning* and *VSE/SP Installation*.

Deleting Part of VSE/SP

If you wish, you can delete one or more of the components included in VSE/SP. To do this, you must order a PRPQ (Programming Request for Price Quotation). You then receive the complete VSE/SP system, with instructions on how to delete one or more components after initial installation.

If you delete one or more components from your system, you should be aware that this could affect system operation or maintenance procedures.

3. What can I add "on top"?



You can add software that you:
(a) develop yourself under VSE/SP,
(b) migrate from a previous system,
(c) receive from IBM or another vendor!

Key Functions From Component Program Products

VSE/Advanced Functions

VSE/Advanced Functions provides basic operating system support for IBM System/370 and 4300 processors. This includes support for:

- Up to 16 megabytes of processor (*real*) storage.
- Up to 40 megabytes of virtual storage.
- A new VSE librarian.
- Conditional JCL (Job Control Language).
- Variables in stored JCL procedures.

ACF/VTAM and BTAM-ES

Two telecommunications access methods, ACF/VTAM and BTAM-ES, are included in VSE/SP.

ACF/VTAM, which is compatible with Systems Network Architecture (SNA), can control communication among devices in both single-processor and multiple-processor networks. When a VSE/SP system is a *node* in a network, function from ACF/VTAM allows:

- Display station users to access applications installed on other systems.
- Data to be transferred to/from other systems for processing.
- Other systems to access VSE/SP.

BTAM-ES is a telecommunications access method that communicates with local and remote devices using Binary Synchronous Control (BSC) line protocol.

CICS/DOS/VS

CICS/DOS/VS controls system facilities and functions that can be used online. This includes online applications and VSE/ICCF. CICS/DOS/VS communicates with display stations and terminal printers via ACF/VTAM or BTAM-ES.

VSE/ICCF

VSE/ICCF is an interactive tool for system administration and for program development. Through it, source code and data can be entered from a display station and stored in a library. Jobs can also be created and submitted for processing.

VSE/POWER

VSE/POWER facilitates the processing of batch jobs. When a user submits a batch job for processing, VSE/POWER temporarily stores the job on disk space until it can be run. As the job is processed, VSE/POWER *spools* printer and punch output to disk space for printing or punching at a later time.

In a multiple-processor configuration, two or more VSE/SP systems can share a single set of VSE/POWER files. In addition, VSE/POWER's networking facilities can be used to process jobs on other systems and exchange files or VSE/ICCF library members among systems.

DISOSS -- Distributed Office Support System/370 (3.2.0) is a program that helps people with little data processing experience to: (a) retrieve and file documents stored at a main system and (b) send and receive messages to other users.

DL/I -- Data Language/I DOS/VS (1.7.0) is a hierarchical data base management control system.

DMS/CICS/VS -- Development Management System/CICS/VS (1.4.0) helps programmers rewrite existing applications for an online environment and create new online applications.

INFO/SYSTEM -- Information/System for VM/370 and VSE (1.1.2) provides interactive support for retrieving information from an online data base that is used to manage a VSE system.

ISPF -- Interactive System Productivity Facility is a dialog manager for interactive applications. It is often installed with another optional program, ISPF/PDF. ISPF/Program Development Facility provides special functions for the development and use of interactive applications.

ISPF and ISPF/PDF will be supported with the release level current at general availability of VSE/SP 2.1.

LOGREP -- VSE/Access Control-Logging and Reporting (1.2.0) is a data security program for monitoring the use of protected system facilities and functions.

NCCF -- Network Communications Control Facility (1.2.0) is a program product for managing a communications network.

NPDA -- Network Problem Determination Application (3.1.0) is a tool for doing network problem determination.

OCCF -- VSE/Operator Communication Control Facility (1.2.0) is a program product designed to reduce operator interaction with a VSE-controlled installation

PL/I -- DOS Programming Programming Language/I (1.6.0) is a programming language designed for use in commercial and scientific applications.

RPG II -- DOS/VS Report Program Generator II (1.3.0) is a programming language for writing applications used in a commercial business environment.

SDF/CICS -- Screen Definition Facility/CICS (1.4.0) is an online development tool for programmers.

SORT/MERGE -- DOS/VS Sort/Merge (2.5.0) provides support for sorting multiple files of logical records and merging those files.

SQL/DS -- Structured Query Language/Data System (1.2.0) is a relational data base management system with online query and report writer facilities.

Developing Applications

VSE/SP provides a number of programming functions to help you develop your own online and batch applications. These include functions for creating and editing source code and testing new online applications.

In addition, you can install one or more IBM program products that aid in application development. A wide range of high-level programming languages, program development productivity aids, and data base programs are available to meet your needs.

Migrating Applications

In general, existing applications that you now have running on a DOS/VSE, DOS/VS, or DOS system also will run under VSE/SP. The manual *VSE/SP Migration* has information to help you move such applications to your VSE/SP system.

Adding IBM or Vendor-Supplied Software

Both IBM and vendor-supplied software that runs successfully under VSE and is not dependent on a previous release of a VSE/SP component program product can be added to your system.

VSE/SP supports a subset of this VSE-compatible software as *optional programs*. These are IBM-supplied VSE programs and program products that use the format of the new VSE librarian and are installed and serviced with the help of special VSE/SP dialogs and code. The inside of this foldout has more information about optional programs.

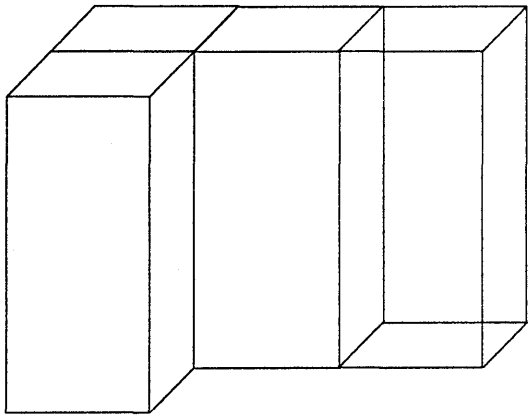
Making Additional Software Available to Users

Whenever you add an online application or program to your system, you can fully integrate it into VSE/SP's Interactive Interface. You can change the Interactive Interface, for example, to make a new business application available through it.

Integrating online applications and programs this way creates a consistent interface for system users. It also can increase user acceptance of these applications and result in higher productivity.

For more information about the Interactive Interface and how to *tailor* it to fit your particular system, see pages 21 - 24.

4. How much hardware do I need?



The choice is really yours!

Ordering and Installing Optional Programs

The optional programs supported by VSE/SP offer a wide range of data processing functions. For example, there are optional programs for:

- Developing your own applications.
- Operating an IBM 3705/25 Communications Controller.
- Controlling network operation.
- Maintaining system security.

You can order and install optional programs at the same time you order and install VSE/SP, or you can order and install them at a later time. Thus you can increase your system's data processing capability whenever your needs change.

The manuals *VSE/SP Planning* and *VSE/SP Installation* have information to help you add one or more optional programs to your system.

Optional Programs Available

The optional programs available when this manual was printed are listed below. Numbers in parentheses refer to a program's Version, Release, and Modification Level.

For more information about optional programs, contact your IBM representative or refer to manuals listed in the appendix "Related Publications" (pp. 50 - 55). Also note that IBM may announce other optional programs as supported by VSE/SP after the availability of this manual.

ACF/NCP -- Advanced Communications Function for the Network Control Program (2.1.0) provides software support for the IBM 3705/25 Communications Controller.

ACF/SSP -- ACF/System Support Programs (2.1.1) is a set of programs that provide generation and utility functions for ACF/NCP.

COBOL -- DOS/VS Common Business-Oriented Language (1.3.0) is an English-like programming language for business data processing applications.

CSP/AD -- Cross-System Product/Application Development (1.1.4) is a program product for developing applications interactively.

CSP/AE -- CSP/Application Execution (1.1.4) is used for processing programs developed under CSP/AD.

CSP/Q -- CSP/Query (1.1.2) is a program for extracting and processing information from data files.

DATA-DICT -- DOS/VS DB/DC Data Dictionary (1.4.0) is a tool for creating program documentation and for managing information about a data processing system.

When selecting display stations for your system, you should note that:

- Dialogs and Help panels of the Interactive Interface use just the first twenty-four lines of any screen.
- VSE/SP is not programmed to use the color capabilities of a display station or terminal printer. Applications running under VSE/SP, however, can be coded to use the capabilities of these devices.

System and Terminal Printers

VSE/SP supports both *system* and *terminal* printers.

System printers are large, stationary devices that can be used for high-volume output produced by batch programs. The IBM 3203, 3289, and 4245 line printers are examples of supported system printers.

Terminal printers are often used to print data which appears on a display station screen or is produced by online applications. Examples of terminal printers are the IBM 3268, 3287, and 5210.

Disk Devices

VSE/SP supports FBA (Fixed Block Architecture) and CKD (Count-Key-Data) disk devices. You can use both FBA and CKD devices in your hardware configuration. You also can mix different types of FBA or CKD devices. For example, your configuration can have both 3310s and 3370s, two different types of FBA devices.

Page 14 shows the number of disk devices necessary to install VSE/SP. Note that the disks used to install and service VSE/SP must be of the same device type.

The total amount of disk space required by your system depends on the amount of additional software you install and the size of your data files.

Magnetic Tape Units

VSE/SP supports several models of IBM 2400, 3400, and 8809 magnetic tape units. If you frequently back up and restore large amounts of data, it is recommended that you have at least one magnetic tape unit that supports 6250 bytes per inch.

Remote Devices

Your VSE/SP system does not need to have all of its input/output devices in one location. Remote devices connected over switched or nonswitched communication lines also can be used. These lines can be attached either to an IBM communication control unit or to an integrated communication adapter available with some processors.

For a list of some possible remote devices, see the appendix "Supported Hardware Devices" (pp. 38 - 43).

Supported Devices

VSE/SP supports all of the hardware devices that its component program products support. The inside of this foldout is a brief introduction to the wide range of devices this involves. For more detailed information, refer to the appendix "Supported Hardware Devices" (pp. 38 - 43) or to publications listed in "Related Publications" (pp. 50 - 55).

Minimum Configuration

You can install VSE/SP on a configuration with ten or fewer devices. Besides a processor, you will need:

1 system (operator) console
1 local display station with a 24 x 80 screen
1 magnetic tape unit
1 system printer
1 - 5 disk devices

The number of disk devices needed to install VSE/SP depends on the specific device type you use:

IBM Device Type	Addresses Per Device	Number of Devices Needed
3310	1	5 *
3330	1	5 *
3340	1	5 *
3350	1	2
3370	2	1
3375	2	1
3380	2	1

* = additional device may be needed for Generation Feature

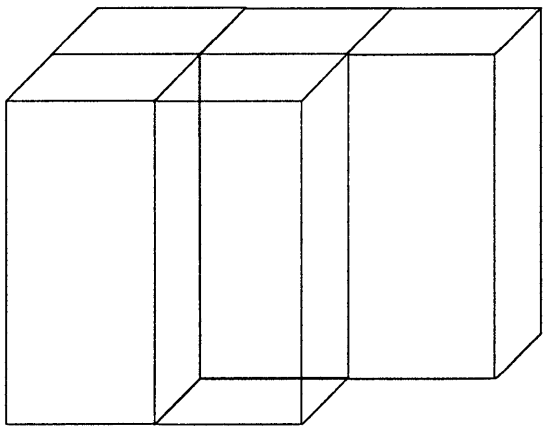
At initial installation, VSE/SP checks to see if the minimum configuration is present. If it does not find the required devices, you must enter information about them from the system console.

System Reconfiguration

After using your VSE/SP for a period of time, you may want to change your hardware configuration. For example, you may want to replace a system printer or add several remote devices.

VSE/SP's Interactive Interface has dialogs to help you easily reconfigure your system. For explanations of how to use them, see the manuals *VSE/SP System Use* and *VSE/SP Networking*.

5. How long will it take to install VSE/SP?



Installation of VSE/SP takes only about two hours!

Processors

You can install VSE/SP as an independent system on IBM System/370 and 4300 processors with a minimum of 1 megabyte of processor storage. This includes:

IBM System/370 Processors	IBM 4300 Processors
138	4321
145	4331
148	4341
155-II	4361
158	4381
3031	
3033	

The maximum processor storage size supported by VSE/SP is 16 megabytes. When installed under VM/SP, VSE/SP also can run on other processors than those listed. Two megabytes of processor storage are required, however.

Note that your system's specific operating environment may mean that you will need a processor with more than one megabyte of storage. For example, it is recommended that you have a processor with at least two megabytes of storage if your system operates in a network with ACF/VTAM. And if you currently have a system which already fully utilizes your processor's storage, you should review the storage requirements of the ACF/VTAM and CICS/DOS/VS component program products when planning system migration.

The *total* amount of processor storage needed for efficient daily operation of your system depends on the number of display stations in use and the mix of concurrent work. This mix may include:

- Batch program processing.
- Use of online applications and optional programs.
- Online program development.
- Communication with remote devices or other systems.

System Consoles

A system console is required for a VSE/SP system. Normally, this will be an IBM 3270 display console with a screen size of 24 lines, 80 characters per line.

When VSE/SP is installed under VM/SP, other devices that emulate a 3270 display station with a 24-line screen also can be used as the system console.

Display Stations

VSE/SP supports several models of IBM 3178/79/80, 3278/79, and 8775 display stations. This includes devices with different screen sizes (from 24 to 43 lines, 80 characters per line) and color capability.

Tasks Required After Initial Installation

Once initial installation is complete, you then use VSE/SP's Interactive Interface to do installation tailoring. This involves entering specific information for your system's:

- Maintain System History Program (MSHP).
- Hardware device addresses and configuration.

After you complete these tasks, VSE/SP is ready for use. If you wish, you then can do one or more optional installation tasks (install an online application, for example).

Information for Optional Installation Tasks

Depending on how your system is to be used, you may do one or more optional installation tasks. Topics related to these installation tasks are introduced elsewhere in this manual:

- Pages 1 - 4 show how a system with VSE/SP can be part of a communications network.

  VSE/SP supplies a number of code skeletons for creating the definitions needed to install a VSE/SP system in a network. Following instructions in the manual *VSE/SP Networking*, experienced programming personnel at the network's central site can complete these skeletons, create a network definition tape, and send the tape to the remote VSE/SP system.

  When the tape arrives, the administrator uses a dialog for network installation. The next time the VSE/SP system is started, it automatically becomes active within the network.

- Pages 5 - 8 briefly describe the VSE/SP Generation Feature and how to install it.

  The manuals *VSE/SP Planning* and *VSE/SP Installation* have information about how to install and service the Generation Feature.

- Pages 9 - 12 talk about adding additional software (business applications, for example) to a VSE/SP system.

  The manual *VSE/SP Migration* outlines the process for migrating applications that you currently may have on a VSE-based system to a VSE/SP system. In addition, *VSE/SP Planning* and *VSE/SP Installation* have information about installing VSE/SP's optional programs.

- Pages 21- 24 describe VSE/SP's Interactive Interface and how you can tailor it to meet your needs.

  VSE/SP Planning and *VSE/SP System Use* explain how to use the Interactive Interface.

In data processing, the term *installation* means different things to different people. For some, it is just the physical installation of hardware devices. Others think of it as transferring code from magnetic tape to processor or disk storage.

The most accurate definition of installation, however, focuses on the reason *why* you have a data processing system. That reason, of course, is to do productive work.

When understood in this context, installation can be defined as *the series of steps--the process--that makes your complete system ready for use.* This process ends when all of the system's users can sign on and do their normal work.

Required Installation Tasks

To make your VSE/SP system "usable," you will be required to:

1. Perform an *initial installation* of VSE/SP.

   This basically involves: (a) transferring VSE/SP from its distribution tapes to disk space and (b) starting up the system for the first time.

   During initial installation, many things are done automatically for you. Because of this, it should only take you about two hours to complete this required task.

2. Use a number of VSE/SP dialogs to do installation tailoring.

   Through these dialogs, you provide VSE/SP with specific information vital to the operation of your system.

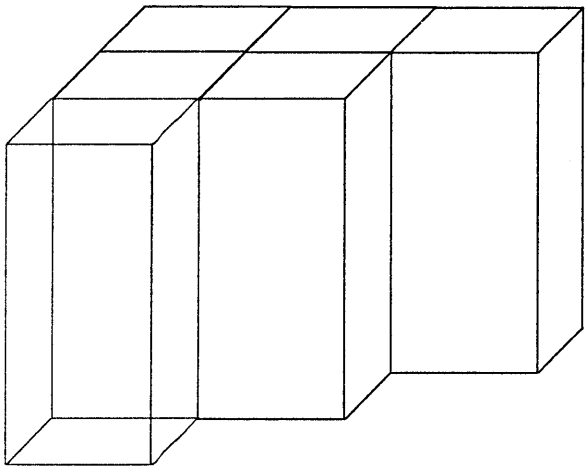
Optional Installation Tasks

Depending on your specific system and its users, you may follow up the required installation tasks with one or more optional installation tasks. These tasks include:

- Installing VSE/SP's Generation Feature.
- Installing additional software (VSE/SP optional programs, for example).
- Migrating applications and data from a previous system.
- Making your system part of a communications network.

The inside of this foldout has more information about installing VSE/SP and making your system ready for use.

6. Once it's installed, how can I use my system?



Our Interactive Interface makes it easy!

Initial Installation

When you order VSE/SP, IBM ships you two distribution tapes. These two tapes contain the complete VSE/SP pregenerated system.

Following instructions in the manual *VSE/SP Installation*, you perform initial installation by:

1. Preparing disk devices for use.

   As the first step in initial installation, you use a stand-alone program, Device Support Facilities, to initialize all *system* disks. System disks are reserved for and only used by VSE/SP. If you wish, you also can initialize *user* disks at this time. These disks will contain your own programs and data.

2. Transferring the main VSE/SP system library from tape to disk.

   Once disks are initialized, you use another stand-alone program to load the *system library* from tape to disk. This library contains all of the VSE/SP components necessary to start up your system for the first time.

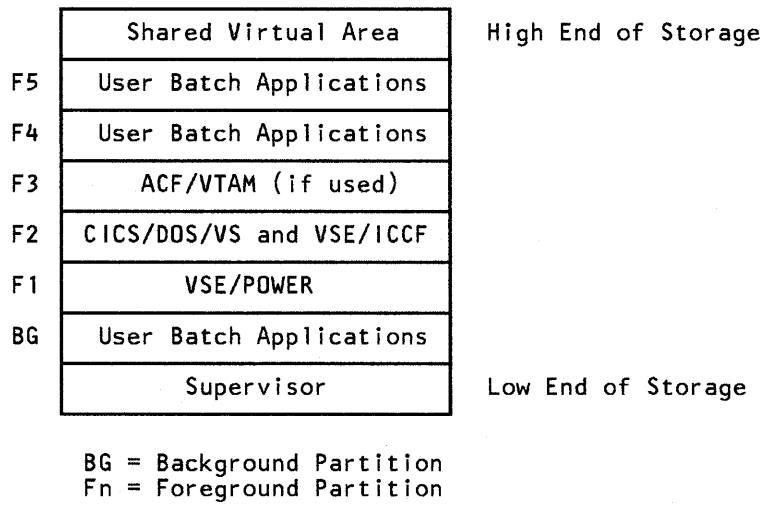
3. Starting up the system.

   During the first Initial Program Load (IPL) of your system, VSE/SP does many installation tasks automatically for you. These include:

   - Checking that the minimum hardware configuration is present.
   - Creating and loading all system files.
   - Creating and loading all predefined libraries.
   - Starting system *partitions* and readying them for use.

   VSE/SP is initially configured to operate with 16 megabytes of virtual addressable storage. When necessary, you later can extend this to 40 megabytes.

   Virtual storage that is not used by the supervisor control program or the SVA (shared virtual area) is divided into partitions. At initial installation, six of twelve possible partitions are defined and activated for certain functions:



Dialogs for Tailoring the Interactive Interface

The Interactive Interface has three main dialogs to help you tailor the way users see and work with their system. These are the dialogs for:

1. Maintaining User Profiles

   When you install VSE/SP, several user profiles are automatically defined for you. One of these is used only during initial installation. There are also predefined profiles for an administrator, a programmer, and a console operator--different ways to access and use the system.

   Using these predefined profiles as models, you can define other user profiles which fit your particular needs. You can even create your own user types (an insurance claims expert, for example).

2. Maintaining Selection Panels

   A selection panel is a menu of the various system functions that are available to a user. After signing on to the system, most users see a selection panel. From it, they select the function they want to use. Personnel who can use only one part of the system go directly to that function.

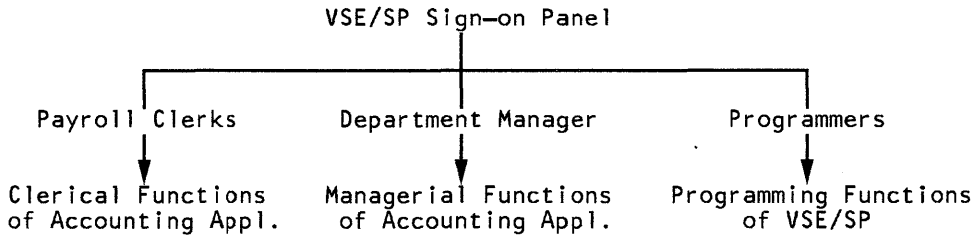
   Through the dialog for maintaining selection panels, you can change the selection panels that VSE/SP predefines for you. You also can create your own selection panels for installed applications or for special users.

3. Maintaining Application Profiles

   When you install an online application, you can define an *application profile* that identifies the application to the Interactive Interface and enables users to access the application through it. Doing this integrates the application into your system and preserves a unified system appearance for users.

The figure below illustrates how an administrator could tailor the Interactive Interface so that users of an installed accounting application could access its functions. To do this, the administrator has: (a) defined profiles for the application and its users and (b) created selection panels to fit those users.

Users of the application see the appropriate selection panel immediately after signing on to the system. Other system personnel who do not use the application (programmers, for example) are not affected by the changes the administrator has made to the Interactive Interface.



VSE/SP's Interactive Interface is a key factor in system ease-of-use and productivity. Through it, VSE/SP *unifies the different parts of the system and makes them available to users.*

What the Interactive Interface Does

Naturally, not every user needs to access the same parts of your system. Someone who only works with business applications, for example, has no need for programming tools. And programmers do not normally do administration tasks.

For this reason, the Interactive Interface controls how different people see and work with the system by means of *user profiles*. Each user has a profile that defines that person to the system and establishes his or her scope of authority.

When a user signs on, the Interactive Interface makes available those parts of the system authorized by the profile. This does not mean, however, that users must work directly with separate system components like VSE/VSAM or VSE/ICCF. Instead, the Interactive Interface has an extensive set of *selection* and *data entry panels* that acts as a buffer between users and system components. Through these panels, users communicate with the system and supply it with information to do something for them. In many cases, users only need to enter a single number in a panel or press a PF (Program Function) key to work with the system.

Thus the Interactive Interface's panels free users from needing extensive knowledge of different commands and control languages for the separate IBM program products included in VSE/SP. In fact, most users will never need to work directly with them. They will work with the Interactive Interface; and it will take care of the rest.

"Sample User Panels" (pp. 44 - 49) has some examples of panels from the Interactive Interface.

Tailoring the Interactive Interface

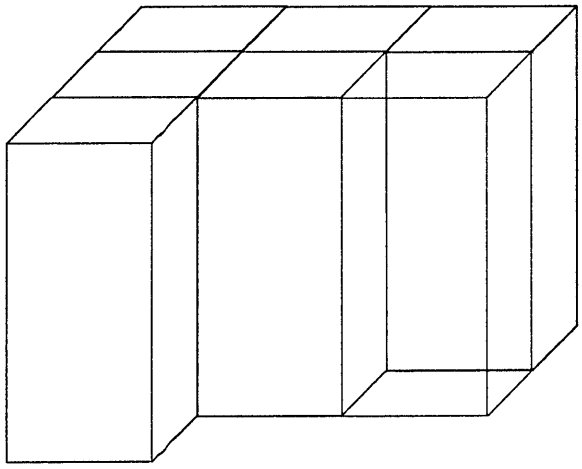
The Interactive Interface is predefined to fit user roles and tasks that are common to data processing. But if necessary, you also can easily *tailor* it to fit your particular system.

You may want to tailor the Interactive Interface for a number of reasons. For example, you could make additional software that you install available through it. Or it may be that the user roles and tasks defined by the Interactive Interface are not 100% applicable to your system. If this is the case, you do not have to change the way you operate your system just to fit the predefined Interactive Interface. Instead, you can change it to meet your needs.

The inside of this foldout has more information about: (a) the user support provided by the Interactive Interface and (b) how you can tailor it. For details, see the manuals *VSE/SP Planning* and *VSE/SP System Use*.

OPEN HERE

7. What if something goes wrong?



You can always get help!

Basic User Support

System Administration

The administrator manages the system for other users and has over-all control of its operation. The Interactive Interface provides this person with a number of special dialogs. These include dialogs for:

- Installing VSE/SP, the Generation Feature, and optional programs.
- Configuring system hardware.
- Maintaining user and application profiles.
- Managing VSE/VSAM files and catalogs.
- Applying system service.

Programming

The Interactive Interface supports application programmers with dialogs for:

- Creating and editing source code in their own programming libraries.
- Creating application job streams.
- Displaying completion status of jobs.
- Performing online problem determination.

System Operation

In the past, most data processing systems required someone stationed full-time at the system console. For a VSE/SP system, some tasks (like starting up the system) still must be done from this device. VSE/SP's *system console* function, however, reduces the need for a full-time console operator. Through this function, a user at a normal display station can do many things that previously only could be done at the system console. This includes:

- Entering operator console commands to control system operation.
- Reviewing messages that have appeared at the console.
- Displaying system activity and device use.

Online explanations of system console messages also are available.

Application Use

Many of your system's users will only need to access installed business applications. This does not mean, however, that the Interactive Interface cannot also benefit them.

Through the dialogs described on the next page, the administrator can fully integrate online applications into the Interactive Interface. Doing this maintains a single system appearance for users. It also means that the administrator can define which functions of an application are available to different users. Users need only see those parts of an application that apply to their own work.

The programmer of the failing application or the system administrator usually works with stored incident reports. As far as possible, these reports describe the cause of an error in plain language. It may also be necessary, however, to analyze control block and trace table data provided by the report.

Note: "Sample User Panels" (pp. 44 - 49) shows the kind of information given in an incident report.

User Errors

Perhaps the most frequent errors are those caused by users working interactively with the system. These errors can range from accidentally entering the wrong command to creating a job that damages part of the system.

The administrator's control over the system and how others use it should reduce the chance of serious errors occurring. In addition, *VSE/SP Diagnosis* describes how to recover from problems such as damaged libraries and files.

Messages and special *Help* panels aid users in recovering from less serious errors and problems:

- Online Messages

  When a display station user makes a mistake in entering data or replying to a request, a message usually is sent to the display station. *VSE/SP Messages and Codes* describes how to reply to messages issued by VSE/SP and its component program products. Messages issued by any additional software you install should be explained in its related publications.

- Help Panels

  When users are working with VSE/SP's Interactive Interface, Help panels are available to explain the choices of a selection panel or the fields of a data entry panel. Users have direct access to Help panels via a display station PF (Program Function) key.

  VSE/SP also lets you create your own Help panels for any selection panels you add to the Interactive Interface. The manual *VSE/SP Planning* describes how to take advantage of this function.

Corrective Service

If you report a problem with IBM-supplied code, a PTF (Program Temporary Fix) to correct that problem already may exist. If so, the PTF will be sent to you.

From time to time, IBM also will make *refresh distribution* tapes for VSE/SP available. These tapes contain VSE/SP at a higher service level than previously offered. If you order refresh distribution tapes, you can use a special dialog of the Interactive Interface to install them. The job created by the dialog does not force you to do another initial installation or affect your installed applications or user data.

For information about how to apply PTF's or install refresh distribution tapes, see *VSE/SP Planning* and *VSE/SP Installation*.

Functions Provided by VSE/SP

A problem or error that impacts the operation of your data processing system is costly. Not only does it keep users from doing productive work, but it also requires time and money to determine its cause and find a solution.

The inside of this foldout briefly describes a number of functions that VSE/SP provides to help you limit nonproductive system "down" time. These functions cover problems and errors caused by system software, hardware devices, installed applications, and system users.

Guidelines for Problem Solving

Solving problems and errors also is easier if you establish and use *system guidelines* for what to do when they occur. You may, for example, make the system administrator responsible for problem solving. Then if a problem occurs that a user cannot handle, the user can contact the administrator and describe what happened. Once this is done, the administrator should:

1. Make a record of the problem in a system "Problem Log."

2. Gather all information related to the problem. The manual *VSE/SP Diagnosis* explains how to use specific tools and procedures for collecting error information.

3. Try to analyze the problem using the information.

4. Try to recreate the problem if a user error seems to be its cause or if more information is needed.

5. Determine the likely cause of the problem (hardware, software, or user).

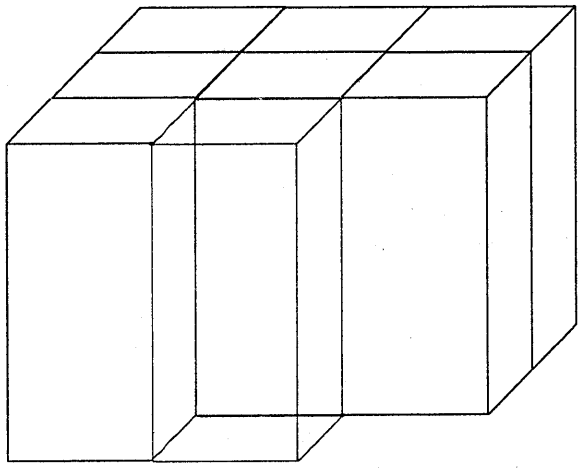
6. Record a detailed analysis of the problem in the Problem Log.

If possible, the administrator should then correct the problem and return the system to normal operation. If not, the administrator should report the problem to the appropriate support group. This can include:

- Programmers at the local system.
- Network support personnel at a central site.
- Vendor (if using purchased software).
- IBM service representative (if the problem seems to be with hardware).
- IBM Support Center (if the problem seems to be with VSE/SP or another program product supported by IBM).

OPEN HERE

8. What if I already have a VSE-based system?



You can migrate to VSE/SP 2.1!

System Software Errors

If an error in system software occurs, a message usually is displayed at the system console. The manual *VSE/SP Messages and Codes* describes the appropriate action for a message. System personnel also can display message explanations online using VSE/SP's system console function.

VSE/SP Diagnosis explains how to handle error situations involving system software. This includes how to use dumps created automatically by the system.

Hardware Errors

When a hardware error occurs, the system tries to recover automatically from the error. If it is successful, the system records information about the error in a file, sends a message to the system console, and continues processing. If automatic recovery does not take place, system personnel should check hardware problem determination guides for possible recovery procedures.

VSE/SP also provides two hardware diagnostic tools, EREP (Environmental Recording Editing and Printing) and VSE/OLTEP (VSE/Online Test Executive Program). You or IBM personnel can use EREP to produce a report with hardware error information. IBM personnel use VSE/OLTEP to do online tests of hardware devices.

Application Errors

Even a well-tested application may contain errors that appear only through an unusual combination of events. New errors also may be introduced when an application is updated.

VSE/SP Diagnosis describes methods for finding errors in applications. This includes use of transaction dumps for online applications and partition dumps for batch applications.

In addition, VSE/SP has a special *online problem determination* function. This function can be used to: (a) test an online application as it is developed and (b) solve problems that may occur after it is installed.

When an error causes an application controlled by CICS/DOS/VS to *abend*, the online problem determination function:

1. Collects and analyzes important data related to the error.
2. Stores this information in an *incident report*.
3. Saves what was on the user's display station screen when the error occurred.
4. Displays a panel with basic information about the error and asks the user to copy it for later problem analysis.
5. Redisplays the user's earlier screen, together with an error message.
6. Returns control to CICS/DOS/VS, which writes a dump to its dump file.

Major New Functions Unique to VSE/SP

Installation Support

VSE/SP extends the installation support provided by the VSE System IPO/E program product to include:

- Help in configuring your hardware addresses and terminal devices.
- Support for the large-capacity IBM 3380 and 3370-2 disk devices.
- Automatic performance of many initial installation tasks.
- New dialogs for installing the Generation Feature and optional programs.

Interactive Interface

The Interactive Interface simplifies use of VSE/SP's various functions and facilities. After signing on, system personnel--from data processing professionals to application end users--are presented panels that reflect their role in your organization. From these panels, they select the task they want to do or the application they wish to access. The Interactive Interface then handles all related system components internally.

For experienced users, VSE/SP supports: (a) a *fast path* function for skipping panels and (b) direct use of components, when necessary. In addition, you can easily tailor the Interactive Interface to meet your particular needs.

Networking Support

In a networking environment, VSE/SP provides support for:

- Configuring remote display stations and terminal printers.

  VSE/SP has separate dialogs for required ACF/VTAM, BTAM-ES, and CICS/DOS/VS definitions.

- Creating and installing a network definition tape.

  VSE/SP provides code skeletons for network definitions. Experienced personnel can complete this skeleton and then create a network definition tape. When a VSE/SP system administrator installs the tape, all networking information automatically is stored in the proper VSE/SP libraries.

- Operating within a network.

  VSE/SP allows for cross-domain signon from remote systems with ACF/VTAM or ACF/VTAME. Experienced personnel at a host system, for example, could thus sign on and perform administration functions.

  VSE/SP also supports the exchange of VSE/VSAM files and VSE/ICCF library members with remote systems. Dialogs of the Interactive Interface can be used to create the jobs for transferring or retrieving data between interconnected systems.

The other sections of this manual have additional introductory information about many of the topics covered in this foldout. For detailed information about the functions provided by VSE/SP, see the manual *VSE/SP Planning*.

Reasons for Migrating

If you already have a VSE-based system and have experience in data processing, you may ask, "Why should I switch to VSE/SP? What's in it for me?"

The inside of this foldout summarizes why we think there is a *great deal* in it for you. One reason is the number of major improvements in function and ease-of-use that IBM has made to the program products included in VSE/SP. In addition, VSE/SP has new functions and productivity aids developed especially for it. Called *unique code*, this programming makes your entire system easier to install, maintain, and use.

VSE/SP's Migration Aids

Migrating to a new release of an operating system is a unique task for each user. System tailoring, operating environment, or additional installed software all contribute to make each system unique. No single method, therefore, can rigidly be applied to every separate migration effort.

To help your system personnel with this task, VSE/SP provides a number of migration aids. The most important of these is the manual *VSE/SP Migration*, which has information about planning for and then performing migration of your present VSE-based system to VSE/SP. This includes how to migrate:

- Jobs that run on your present system.

  Many jobs that run successfully on your current VSE-based system will run unaltered under VSE/SP. It is recommended, however, that your system personnel use VSE/SP's Job Control Scanner utility program to examine the JCL used in these jobs. From the report produced by this program, they can see which JCL, if any, should be changed. They then can make the required changes before running the job in production mode.

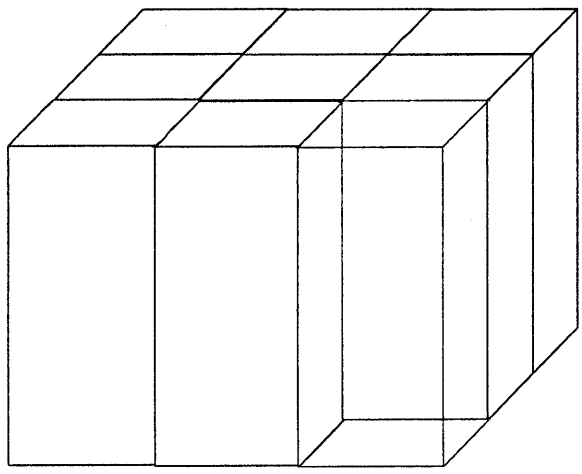
- VSE libraries and VSE/VSAM files.

  To migrate either VSE libraries or VSE/VSAM files, personnel only need to back up the libraries and files they want to transfer and restore them to the new VSE/SP system. The Interactive Interface has a dialog for creating the restore jobs.

- Jobs and output in the VSE/POWER queues.

  VSE/POWER provides support for the migration of the reader, list, and punch queues through its Offload Facility.

9. Where can I learn more about VSE/SP 2.1?



You can:
(a) talk to your IBM representative,
(b) enroll in a course for VSE/SP,
(c) look into VSE/SP's new manuals!

Major New Functions of Component Program Products

VSE/Advanced Functions

Enhancements to VSE/Advanced Functions include:

- Support for up to 16 megabytes of processor storage in all operating modes.
- Support for up to 40 megabytes of virtual addressable storage. This enables you to define a second CICS/DOS/VS partition, for example. You then could use one CICS/DOS/VS subsystem for application development and testing and one for production purposes.
- Support both for conditional JCL and for variables in stored procedures. Complex batch jobs thus can be processed with less operator intervention.
- A new librarian which has a simpler set of commands, uses a simpler disk lay-out, makes more efficient use of allocated space, and provides improved data security. In addition, any single VSE library can contain procedures, phases, object modules, and source books.

VSE/POWER

New functions of VSE/POWER provide:

- Shared spooling as standard support, instead of as a separate feature.
- Larger data buffers for networking.
- Improved message traffic in network transmission.
- Cross partition access to the VSE/POWER queues from any other partition.

VSE/ICCF

Enhancements to VSE/ICCF allow for:

- Shutdown and recovery without CICS/DOS/VS shutdown. This means that VSE/ICCF now can be shut down for maintenance without disturbing the processing of CICS/DOS/VS transactions.
- Improved communication with VSE/POWER.
- Processing of VSE librarian commands in an interactive partition.

ACF/VTAM

Through ACF/VTAM, IBM now provides greater support for the integrated communication adapter of IBM 4331/61 processors. With this support, the integrated communication adapter can be used to communicate over packet-switched data networks that have interfaces complying with Recommendation X.25 (Geneva 1980) of the International Telegraph and Telephone Consultative Committee.

VSE/SP Installation — Detailed information for installing:

- VSE/SP.
- VSE/SP's Generation Feature.
- Optional programs.
- System service.

VSE/SP System Use — Detailed information on how to do tasks like:

- Managing batch queues.
- Backing up and restoring data.
- Reviewing system disk space.
- Maintaining user and application profiles.
- Maintaining libraries and files.
- Tailoring the Interactive Interface.

VSE/SP Migration — Planning for migrating to a VSE/SP system, plus procedures and suggestions for actual migration. The manual covers migration paths from several VSE-based systems and includes sample jobs.

"Migration" (pp. 29 - 32) has more information about this manual.

VSE/SP Networking — Information on how to define remote devices and operate your system in a multiple-processor network. The manual covers:

- Planning for networking.
- Using VSE/SP networking dialogs and code skeletons.
- Network operation.

VSE/SP Diagnosis — Instructions for isolating the cause of operating problems and collecting data for further analysis. The manual also describes utilities and aids for problem determination and resolution.

VSE/SP Messages and Codes — Messages that are issued by VSE/SP and its component program products and descriptions of what action--if any--should be taken.

Online explanations for messages also are available through VSE/SP's system console function.

VSE/SP Master Index — An index for finding information in VSE/SP's manuals and key publications for component program products. The entries in the index point to manuals, not to specific page numbers. When referred to a manual, use its more detailed index to locate page numbers.

Talking To Your IBM Representative

Your IBM representative will be glad to help you learn more about VSE/SP and how it can meet your data processing needs. You can contact your representative, for example, to get more information about supported hardware devices or additional software that you can install.

If you wish, your representative can set up a demonstration of a VSE/SP system at an IBM Customer Center. Then you can see for yourself how easy it is to use VSE/SP's Interactive Interface. VSE specialists at the support center also will be available to answer technical questions you may have.

Taking Courses for VSE/SP

IBM provides a wide range of courses to help your system personnel install and maintain your VSE/SP system. These courses include:

- Self-paced independent study programs that system personnel can do on their own, as their work schedule permits.
- Overview classes to VSE/SP concepts and facilities which are given at an IBM Customer Center.
- Classes at an IBM Education Center that provide in-depth knowledge of VSE/SP facilities and functions.

For information about the courses available for VSE/SP, contact your IBM representative.

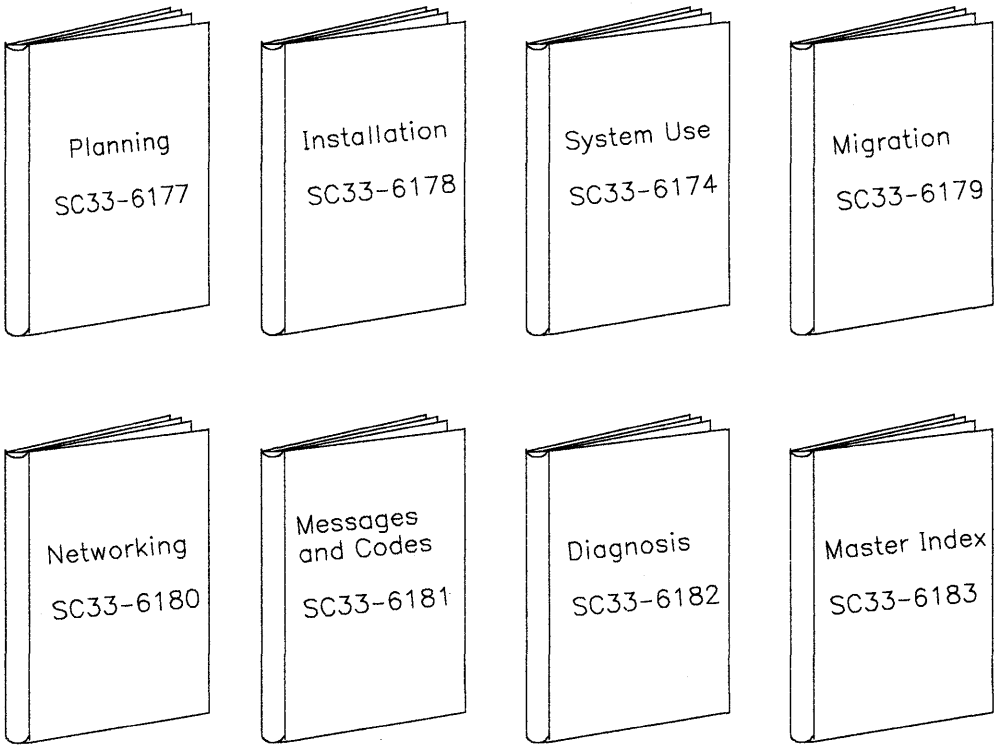
Reviewing Manuals for VSE/SP

A new set of manuals has been written especially for VSE/SP 2.1. Reviewing one or more of these manuals is another good way to learn more about VSE/SP.

It is important to note that the manuals for VSE/SP do not repeat what is in publications for its component program products. Of course, these publications will be of use to you, especially if you tailor VSE/SP extensively. But they cannot show you how to use your *entire* VSE/SP system. That is why VSE/SP provides you with its own manuals--to help you work with your "package" more efficiently and productively.

The inside of this foldout has more information about the manuals for VSE/SP 2.1.

Manuals for VSE/SP 2.1



VSE/SP Planning — Additional information about many of the topics introduced here. Major sections of the manual cover:

- New functions of component program products.
- New functions of VSE/SP-unique code.
- Requirements for system installation.
- Tailoring the Interactive Interface.
- Overviews to important installation, operation, and resource definition tasks.

VSE/SP Installation and *VSE/SP System Use* have detailed planning information for specific tasks introduced in *VSE/SP Planning*. In addition, *VSE/SP Migration* and *VSE/SP Networking* contain planning information for their respective topics.

You also should note that you will sometimes need to use information in manuals for component program products to make a planning decision.

This appendix is a summarized list of the IBM-supplied hardware devices supported by VSE/SP. For more detailed information (such as requirements for attaching devices), refer to publications listed in the appendix "Related Publications" (pp. 50 - 55), or contact your IBM representative. Also note that IBM may announce other processors or input/output devices as supported by VSE/SP after the availability of this manual.

In this appendix, devices are listed by type and number. Model information is given only if this is of significance.

IBM-supplied devices that link to a channel-attached communication control unit are supported by VSE/SP through this control unit. Some of the listed devices may be accessible for data transfer only if you write your own channel program.

Processors

You can install VSE/SP as an independent system on IBM processors with a minimum of 1 megabyte of processor storage. This includes:

IBM System/370 Processors	IBM 4300 Processors
138	4321
145 (See Note 1.)	4331
148	4341
155-II (See Note 1.)	4361
158	4381
3031	
3033 (See Note 2.)	

Notes:

1. Models 145 and 155-II require the optional floating point feature. Model 145 also requires the optional CPU timer and clock comparator.

2. The IBM 3033 is only supported for operation in single processor mode.

The maximum processor storage size supported by VSE/SP is 16 megabytes. When installed under VM/SP, VSE/SP also can run on other processors than those listed above. Two megabytes of processor storage are required, however.

System Consoles

VSE/SP requires a system (operator) console. To meet this requirement, your system can have either a console printer-keyboard or a display console. Note, however, that the Interactive Interface is designed to use a display console that has a screen size of 24 lines, 80 characters per line.

Console Printer-Keyboards	Display Consoles
IBM 3210	IBM 3277
IBM 3215	IBM 3278, Models 2 - 5
	IBM 3278, Model 2A
	IBM 3279, Models 2A, 2B, 3A, 3B
	IBM 3279, Models 2C (See Note.)

Note: System software supports three colors (white, green, and blue) for the IBM 3279, Model 2C.

Local Display Stations

VSE/SP requires at least one local display station that: (a) has a 24-line screen (80 characters per line) and at least 10 PF keys and (b) is supported by ACF/VTAM or BTAM-ES, whichever you chose at initial installation.

Local installation of the following display stations is supported by a dialog of the Interactive Interface:

IBM 3178, Models C10 and C20
IBM 3179, Model 1
IBM 3180, Model 1
IBM 3277, All models with 24-line screens
IBM 3278, Models 2 - 5
IBM 3279, Models S2A, S2B, S3A, S3B, S3G, 2X, and 3X
IBM 8775, Models 1 and 2

Note: The Interactive Interface does not fully support the IBM 3278-5 (which has a screen size of 27 lines, 132 characters per line).

Disk Devices

CKD Devices	FBA Devices
IBM 2311 (See Notes 1 and 2.)	IBM 3310 (See Notes 2 and 4.)
IBM 2314/19 (See Notes 1 and 2.)	IBM 3370 (See Note 4.)
IBM 3330	IBM 3370-2 (See Note 4.)
IBM 3330-11	
IBM 3333	
IBM 3340	
IBM 3344 (See Note 3.)	
IBM 3350 (See Note 4.)	
IBM 3375 (See Note 5.)	
IBM 3380 (See Note 5.)	

Notes:

1. Supported only as input/output device for user data.

2. Not supported for sharing of data across computing systems.

3. Supported as a 3340 with one head/disk assembly of the 3344 simulating four 3348 Model 70 data modules on 3340 disk drives.

4. ISAM is not available for the device, unless the device is used in simulation or emulation mode, simulating or emulating a device supported by ISAM.

5. ISAM is not supported for this device.

Magnetic Tape Units

IBM 2401
IBM 2415
IBM 2420
IBM 3410/11
IBM 3420
IBM 3430
IBM 8809

Punched Card Devices

IBM 1442 Read/Punch, Model N1
IBM 1442 Punch, Model N2
IBM 2501 Reader
IBM 2520 Read/Punch, Model B1
IBM 2520 Punch, Models B2 and B3
IBM 2540 Read/Punch
IBM 2560 Multifunction Card Machine
IBM 2596 Read/Punch (See Note.)
IBM 3504 Reader
IBM 3505 Reader
IBM 3525 Punch
IBM 5424 Multifunction Card Unit
IBM 5425 Multifunction Card Unit

Note: Cannot be used as system input or system output device.

System Printers

IBM 1403
IBM 1443
IBM 3200 (Supported like an IBM 3800. See also Note.)
IBM 3203, Models 4 and 5
IBM 3211
IBM 3262, Models 1, 5, and 11
IBM 3289, Model 4
IBM 3800 Printing Subsystem (See Note.)
IBM 4245
IBM 5203

Note: The logical input/output support must be ordered separately. For ordering details, contact your IBM representative.

Terminal Printers

IBM 3213 (For use with the console of a 3158 processor.)
IBM 3268
IBM 3284
IBM 3286
IBM 3287
IBM 3288
IBM 3289 (All models except Model 4.)
IBM 5210

Optical and Magnetic Character Reader Equipment

IBM 1255 (See Note 1.)
IBM 1259 (See Note 1.)
IBM 1270 (See Note 1.)
IBM 1275 (See Note 1.)
IBM 1287
IBM 1288
IBM 1419 (See Note 2.)
IBM 3881
IBM 3886
IBM 3890 (See Note 3.)

Notes:

1. Supported like a 1419. The IBM 1270 and 1275 are not available in the United States.

2. To use an IBM 1419 with a dual address adapter, you must install the VSE/SP Generation Feature.

3. The logical input/output support must be ordered separately. For ordering contact your IBM representative.

IBM Personal Computers

IBM 3270 Personal Computers or IBM Personal Computers with a 3278/79 Emulation Adapter can be used as intelligent workstations. These devices can be attached locally via a processor's display/printer adapter or via a 3274 control unit. They can be remotely attached via a 3274 control unit.

An IBM Personal Computer that has an SDLC Communication Adapter and the SNA 3270 Emulation and RJE Support program product installed can be attached as: (a) an IBM 3274-51C control unit or (b) an IBM 377X RJE workstation. When attached as a 3274-51C, it is supported as a remote 3278-2 display station.

Communication Control Units

Support is available for the full range of devices that can be attached to an integrated communication adapter of an IBM 4300 processor or to these communication control units:

IBM 2701
IBM 2702
IBM 2703
IBM 3272
IBM 3274, Models 1A, 1B, and 1D
IBM 3704
IBM 3705
IBM 3725
IBM 3791L (A local communication controller.)

Remote Devices/Subsystems

VSE/SP provides dialogs to help you install the following devices over SDLC link connections. For information about attaching other devices via SDLC links or devices that use BCS line protocol, contact your IBM representative.

Device / Subsystem	Control Unit
3270 Information Display System (See Note on next page.)	3274-21C 3274-31C, 51C 3274-41C, 61C 3274-52C 3276-12, 13, 14
3770 Data Communication System	3771-1, 2, 3 3773-1, 2, 3 3774-1, 2 3775-1 3776-1, 2 3777-1
3600/4700 Finance Communication System	3601 3602 4701
3630/3640 Plant Communication System	3631 3632 8100
3650 Retail Store System	3651-A50, B50
3660 Supermarket System	3651-A60, B60 3661

Device / Subsystem	Control Unit
3680 Programmable Store System	3684
IBM Personal Computer	3274 or 3274-51C
Scanmaster	8815
3790 Communication System	3791
5520 Administrative System	5520
5280 Distributed Data System	5280
6670 Information Distributor	6670
8100 Information System	8130 8140
8775 Display Terminal	8775-11, 12
Series/1	Series/1
System/34	System/34
System/38	System/38

Note: The following devices can be attached to control units supported for the 3270 Information Display System:

IBM 3262, Models 3 and 13
IBM 3268, Model 2
IBM 3178, Models C10 and C20
IBM 3278, Models 2 - 5
IBM 3279, Models S2A, S2B, S3A, S3B, S3G, 2X, and 3X
IBM 3287, Models 1, 2, 1C, and 2C
IBM 3289, Models 1 and 2
IBM 3290
IBM 5210, Models G01 and G02

Miscellaneous Input/Output Devices

IBM 3540 Diskette I/O Unit (Supported as a unit-record i/o device.)
Feature 3401 Diskette Drive for IBM 4331 (Supported like an IBM 3540.)
IBM 7443 Service Record File (Used on the IBM 3031 service console.)
IBM 7770 Audio Response Unit

VSE/SP Sign-on Panel

The Sign-on panel indicates that system startup is complete and that the system is ready for use. To access the functions they are authorized to use, personnel enter in the panel the ID and password defined by their user profile. After checking to make sure that the ID and password are correct, the system displays either a selection panel or a panel for a specific function.

Note that the Sign-on panel has three predefined PF keys. The first two have information about how to sign on to the system and use a display station. When your system is part of a communications network, users can press PF4 to display another panel. From it, they can access applications installed on other systems.

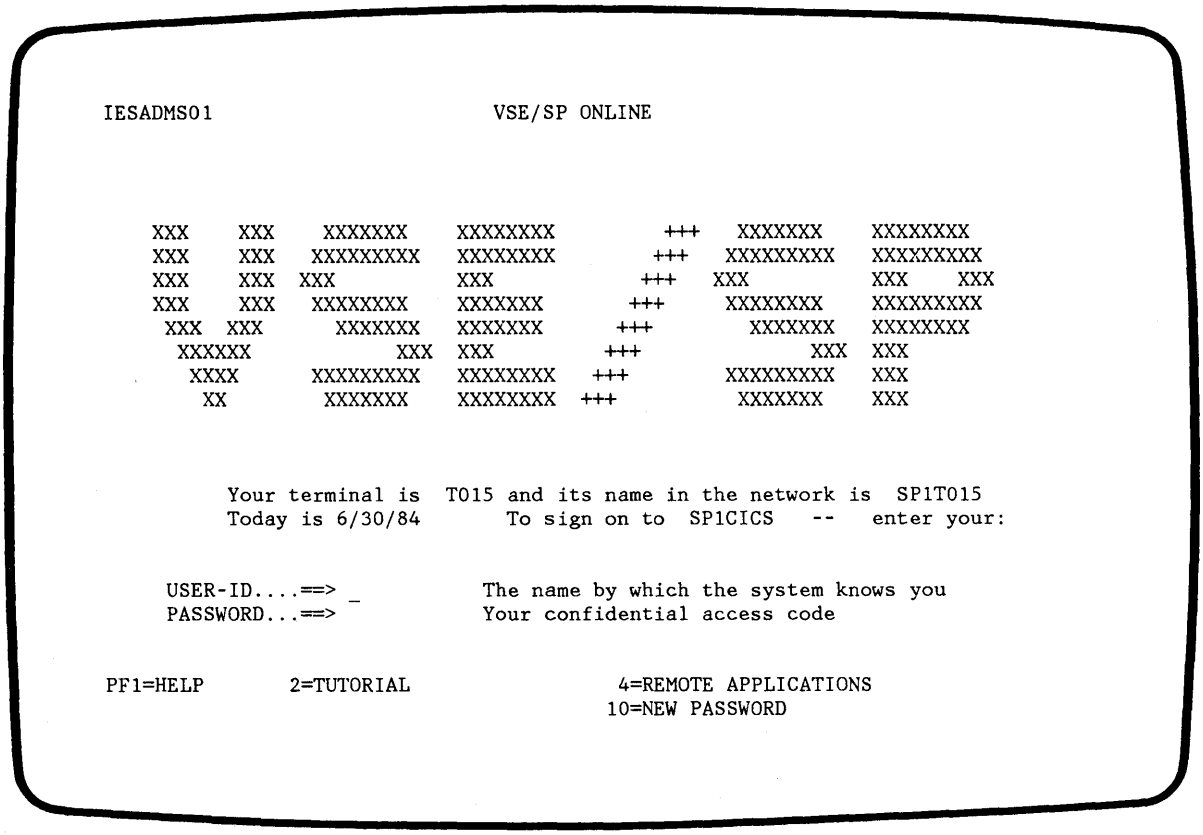


Figure 1. Example of the VSE/SP Sign-on Panel

Selection Panel

A selection panel lists the system functions that are currently available to a user. To access a function, a user only needs to enter its predefined number after the arrow at the bottom of the panel. The system then displays either another selection panel or a data entry panel. For example, entering **1** in the selection panel below displays a selection panel for installation tasks. Entering **6**, however, displays a panel for entering VSE/ICCF commands.

```
ADMSL.IESEADM            VSE/SP FUNCTION SELECTION

  Enter the number of your selection and press the ENTER key.

        1  Installation
        2  Resource Definition
        3  Operations
        4  Problem Handling
        5  Program Development
        6  Command Mode









 PF1=HELP                  3=SIGN OFF                  6=ESCAPE(U)
                           9=Escape(m)

===> _
```

Figure 2. First Selection Panel for the Administrator

Function Lists

The Interactive Interface provides Function Lists (FULISTs) to help users work more easily with the VSE/POWER, VSE/ICCF, and VSE/VSAM component program products.

Function Lists are panels which show users a a group of related objects (queue entries or files, for example). Users work with these objects simply by:

1. Placing the display station cursor to the left of an object's name,
2. Typing in a number for one of the functions displayed at the top of the panel,
3. Pressing the **ENTER** key.

Users thus do not have to know individual VSE/POWER, VSE/ICCF, or VSE/VSAM commands. The Interactive Interface takes care of that for them.

For example, to display the output of the job **DTRINIT** in the panel below, you would only have to move the cursor to the left of that name and enter a **1**. You would not enter the VSE/POWER command.

```
IESBQUL                          LIST QUEUE                          Page 1 of 2

OPTIONS:      1 = DISPLAY      2 = CHANGE      3 = PRINT      5 = DELETE

Opt Jobname   Number  Pri  Dis  Class  Pages  CC  Form    To       From
 _  DTRINIT    00002   9    H     A        2   1                    .ADMN
 _  DTRIHARD   00033   9    H     A        2   1                    .ADMN
 _  PAYDEPTA   00010   8    D     A       16   1           .OPER    .OPER
 _  PAYDEPTB   00011   8    D     A        8   1           .OPER    .OPER
 _  FILEDEFS   00040   6    D     A       27   1
 _  DUMPSCAN   00018   5    D     A      109   1
 _  CATMEMA    00075   3    D     A        4   1           .PRG3    .PRG3
 _  CATMEMB    00076   3    D     A        3   1           .PRG3    .PRG3
 _  DEFPROF    00122   3    D     A        5   1
 _  PRTOLDA    00124   3    D     A       10   1                    .ADMN
 _  PRTOLDB    00125   3    D     A       11   1                    .ADMN
 _  JWBTEST    00180   3    H     A       37   1                    .PRG2
 _  SORT04     00202   3    D     A        4   1                    .PRG2
 _  LOADSRT    00212   3    D     A        3   1                    .PRG2

 PF1=HELP                    3=END      4=RETURN   5=REFRESH
                 8=FORWARD

LOCATE JOBNAME ==> _____________
```

Figure 3. Example of a Function List for the List Queue

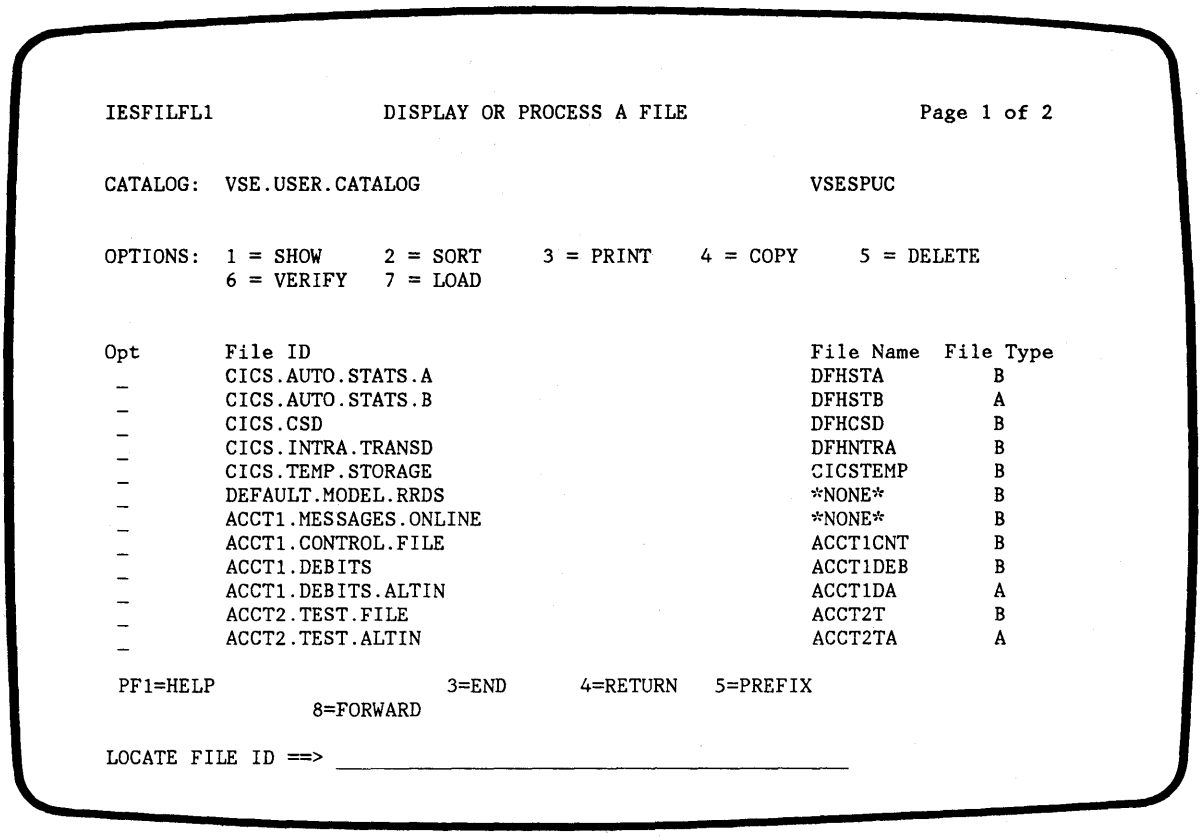


Figure 4. Example of a Function List for VSE/VSAM Files

File Information Panel

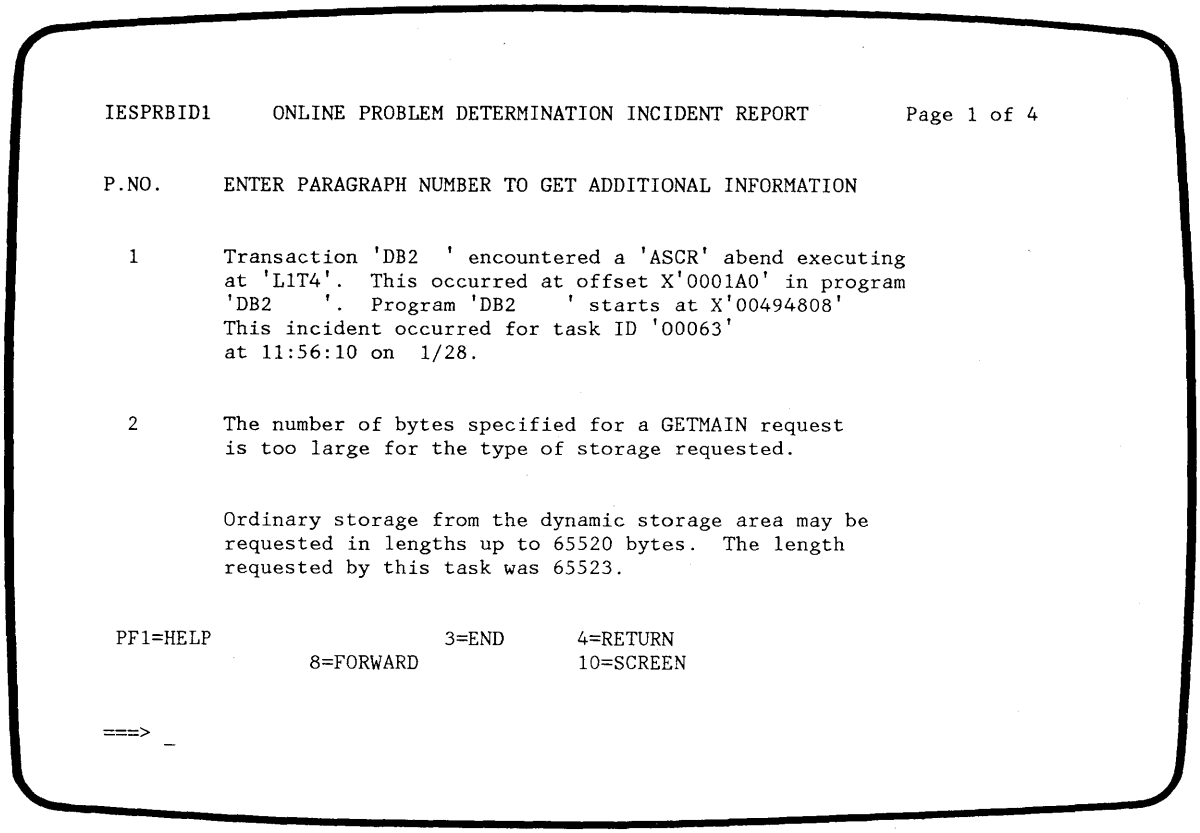
The panel below shows the first of two panels that is displayed when you enter **1** (SHOW) in the Function List for VSE/VSAM files. The second panel has details about the file's creation date, size, and disk device.

```
IESDILDETA              SHOW FILE INFORMATION                 Page 1 of 2

File Attributes:        Attribute Values:

FILE ID                 CICS.CSD
FILE NAME               DFHCSD
CATALOG NAME            VSESPUC

FILE ORGANIZATION       2         1 Non keyed  (ESDS)
                                  2 Keyed      (KSDS)
                                  3 Numbered   (RRDS)
                                  4 Sequential (SAMESDS)

FILE ACCESS             2         1 Multiple Read OR Single Write
                                  2 Multiple Read AND Single Write
                                  3 Multiple Read AND Write (no integrity)
                                  4 Multiple Read AND Write (with integrity)

FILE USAGE              1         1 File is used as a Data File (NOREUSE)
                        2         1 File is used as a Work File (REUSE)

 PF1=HELP                  3=END      4=RETURN
              8=FORWARD
```

Figure 5. Example of an Information Panel for a VSE/VSAM File

Online Problem Determination Panel

The panel below is an example of the kind of information that VSE/SP's online problem determination function stores in an incident report. Because of incident reports, programmers or the system administrator can find the cause of an abend more quickly and reduce the amount of application "down time."



```
IESPRBID1     ONLINE PROBLEM DETERMINATION INCIDENT REPORT        Page 1 of 4

P.NO.     ENTER PARAGRAPH NUMBER TO GET ADDITIONAL INFORMATION

  1       Transaction 'DB2  ' encountered a 'ASCR' abend executing
          at 'L1T4'.  This occurred at offset X'0001A0' in program
          'DB2    '.  Program 'DB2    ' starts at X'00494808'
          This incident occurred for task ID '00063'
          at 11:56:10 on  1/28.

  2       The number of bytes specified for a GETMAIN request
          is too large for the type of storage requested.

          Ordinary storage from the dynamic storage area may be
          requested in lengths up to 65520 bytes.  The length
          requested by this task was 65523.

 PF1=HELP                    3=END       4=RETURN
                 8=FORWARD               10=SCREEN

===> _
```

Figure 6. Example of the First Panel for an Incident Report

The publications listed here provide introductory information to:

- IBM program products included in VSE/SP.
- Supported hardware devices.
- VSE/SP optional programs.

Most of these publications refer to other manuals that are available for their product.

Publications for Component Program Products

ACF/VTAM (Version 2, Release 1)

Advanced Communications Function for VTAM Version 2 General Information, GC27-0608

BTAM-ES (Version 1, Release 1)

Basic Telecommunications Access Method Extended Support (BTAM-ES) General Information, GC38-0292

CICS/DOS/VS (Version 1, Release 6)

CICS/DOS/VS General Information, GC33-0155

DITTO for VSE and VM (Version 1, Release 1)

VSE/Data Interfile Transfer, Testing and Operations Utility for VSE and VM General Information, GH19-6103

VSE/Advanced Functions (Version 2, Release 1)

VSE/Advanced Functions Program Summary, GC33-6157

VSE/FCOPY (Version 1, Release 2)

DOS/VSE Fast Copy Data Set Program Program Summary, GC33-6158

DOS/VSE Fast Copy Data Set Program Installation Reference, SC33-6082

VSE/ICCF (Version 2, Release 1)

VSE/Interactive Computing and Control Facility Program Summary, GC33-6159

VSE/Interactive Computing and Control Facility Installation and Operations Reference, SC33-6067

VSE/POWER (Version 2, Release 2)

VSE/POWER Program Summary, GC33-6167

VSE/POWER Installation and Operations, SH12-5329

VSE/VSAM (Version 1, Release 3)

VSE/VSAM General Information, GC24-5143

Note: Version 1, Release 2 of the VSE/VSAM Backup and Restore Feature is included in VSE/SP.

Publications for Supported Hardware Devices

This section does not reference publications for every device listed in the appendix "Supported Hardware Devices." If you want introductory information about a supported hardware device for which no separate publication is given, see:

IBM Input/Output Device Summary, GA32-0039

IBM Data Communication Device Summary, GA27-3185

Processors

IBM System/370 System Summary: Processors, GA22-7001

IBM 4300 Processors Summary and Input/Output and Data Communication Configurator, GA33-1523

Communications Controllers

Introduction to the IBM 3704 and 3505-II Communications Controllers, GA27-3051

Introduction to the IBM 3705-80 Communications Controller, GA27-3004

Introduction to the IBM 3725 Communications Controllers, GA33-0010

Display Stations and Control Units

IBM 3178 Display Station Description, GA18-2127

An Introduction to the IBM 3270 Information Display System, GA27-2739

IBM 3270 Information Display System Library User's Guide, GA23-0058

An Introduction to the IBM 8775 Display Terminal, GA33-3040

Terminal Printers

IBM 3268 Printer Component Description, GA27-3267

IBM 3287 Printer Planning and Site Preparation Guide, GA18-2018

System Printers

IBM 3203 Model 5 Printer Component Description and Operator's Guide, GA33-1529

IBM 3211 Printer, 3216 Interchangeable Train Cartridge, and 3811 Printer Control Unit Component Description and Operator's Guide, GA24-3543

IBM 3262 Printer Models 1 and 11 Component Description, GA24-3733

IBM 3262 Printer Model 5 Product Description, GA24-3936

IBM 3289 Line Printer Model 4 Operator Guide, GA27-3159

IBM 4245 Printer Model 1 Component Description and Operator's Guide, GA33-1541

Disk Devices

IBM 3310 Direct Access Storage Reference, GA26-1660

Reference Manual for IBM 3330 Series Disk Storage, GA26-1615

Reference Manual for IBM 3340/3344 Series Disk Storage, GA26-1619

Reference Manual for IBM 3350 Direct Access Storage, GA26-1638

IBM 3370 Direct Access Storage Description, GA26-1657

IBM 3375 Direct Access Storage Description and User's Guide, GA26-1666

IBM 3380 Direct Access Storage Description and User's Guide, GA26-1664

For tutorial information and guidance to help you with the physical management of your disk storage, see *IBM Disk Storage Management Guide*, GA26-1675.

Magnetic Tape Units

IBM 3410/3411 Magnetic Tape Subsystem Component Description, GA32-0022

IBM 3420 Models 3, 5 and 7 Magnetic Tape Subsystem Operator's Guide, S232-0003

IBM 3430 Magnetic Tape Subsystem Introduction, GA32-0069

IBM 8809 Magnetic Tape Unit Description, GA26-1659

Diskette Units

IBM 3540 Diskette I/O Unit Operator's Guide and Programmer's Reference, GA21-9197

IBM 3770 Workstations

Introduction to the IBM 3770 Data Communication System, GA27-3144

Publications for VSE/SP Optional Programs

ACF/NCP and ACF/SSP

Advanced Communications Function for Network Control Program and System Support Programs for the IBM 3705/25: General Information, GC30-3058

CSP

Cross-System Product General Information, GH20-5555

DL/I DOS/VS

Data Language/I Disk Operating System/Virtual Storage (DL/I DOS/VS), GH20-1246

DMS/CICS/VS

Development Management System/Customer Information Control System/Virtual Storage: General Information, GH20-2195

DOS PL/I

DOS PL/I Optimizing Compiler: General Information, GC33-0004

DOS/VS COBOL

DOS/VS COBOL: Compiler and Libraries, General Information, GC28-6473

DOS/VS DB/DC Data Dictionary

DOS/VS DB/DC Data Dictionary General Information, GH20-9193

DOS/VS RPG II

DOS/VS RPG II and OS/VS RPG II, General Information, GC33-6120

DOS/VS Sort/Merge

DOS/VS-VM/System Product, Sort/Merge Version 2: General Information, GC33-4043

ISPF and **ISPF/PDF**

Interactive System Productivity Facility General Information, GC34-2078

NCCF

Network Communications Control Facility, General Information, GC27-0429

NPDA

Network Problem Determination Application, General Information, GC34-2010

SDF/CICS

Screen Definition Facility/CICS General Information, GH19-6096

SQL/DS

SQL/Data System General Information, GH24-5012

VSE/Access Control-Logging and Reporting

VSE/Access Control-Logging and Reporting, General Information, GH12-5130

VSE/OCCF

VSE/Operator Communication and Control Facility General Information, GC33-6113

Glossary

This glossary defines terms as they are used in this manual. If you do not find the term you are looking for, refer to the index or to the manual *Vocabulary for Data Processing, Telecommunications, and Office Systems,* GC20-1699.

The glossary includes definitions published in the:

- *American National Dictionary for Information Processing,* copyright 1977 by the Computer and Business Equipment Manufacturers Association. Copies may be purchased from the American National Standards Institute, 1430 Broadway, New York, New York, 10018.
- *ISO Vocabulary of Data Processing,* developed by the International Standards Organization, Technical Committee 97, Subcommittee 1.

  Definitions from draft proposals and working papers under development by the ISO subcommittee also have been used.

A definition included from one of the above sources is marked by an asterisk (*).

abend. Short for *abnormal end of task.* Termination of a CICS/DOS/VS task before its completion because of an error condition that cannot be handled by automatic recovery facilities.

access method. A program for moving data between virtual storage and input/output devices.

ACF/VTAM. (Advanced Communication Function for Virtual Telecommunications Access Method) A Systems Network Architecture (SNA) access method that controls communication between resources of a single or multiple-processor network.

address. See *device address.*

application program. A program written for or by a user; a program that applies to the user's own work. Often shortened in this manual to just *application.*

See also *batch application* and *online application.*

backup copy. A copy of a file or set of files that is kept for reference in case the original file or set of files is destroyed. In a VSE-based system, backup copies normally are done from disk to tape devices.

batch application. A set of programs that normally processes data without user interaction (an application to print a company payroll, for example). Such an application uses a device, a data file, or the processor intensively for a longer time than online applications.

*** batch processing.** (1) Loosely, the processing of computer programs serially. (2) Pertaining to the technique of processing a set of computer programs such that each is completed before the next program of the set is started. (3) In real-time systems, the processing of related transactions that have been grouped together.

BSC. (Binary Synchronous Communication) A communication line discipline that uses a standard set of control characters and control character sequences to transmit binary-coded data between stations.

BTAM-ES. (Basic Telecommunication Access Method Extended Storage) An IBM-supplied telecommunication access method. It permits read and write communication with remote devices.

channel. A functional unit, controlled by the processor, that handles the transfer of data between processor storage and local peripheral equipment.

CICS/DOS/VS. (Customer Information Control System/Disk Operating System/Virtual Storage) A general-purpose program product that controls online communication between terminal users and a data base.

CKD disk device. (Count-Key-Data disk device) A disk storage device on which storage is allocated by tracks and cylinders. Contrast with *FBA disk device.*

communication controller. A control unit whose operations are controlled by one or more programs stored and executed in the unit (an IBM 3705 Communications Controller, for example). A communication controller manages details of line control and the routing of data through a network.

communication control unit. A communication device that controls the transmission of data over lines in a network. Communication control units include transmission control units such as the IBM 2702 Transmission Control Unit and communication controllers such as the IBM 3705 Communications Controller.

configuration. (1) The arrangement of a computer system or network as defined by the nature, number, and the chief characteristics of its functional units. More specifically, the term may refer to a hardware configuration or a software configuration. (2) The devices and programs that make up a system, subsystem, or network.

*** control program.** A computer program designed to schedule and to supervise the processing of programs of a computer system.

control unit. A device that controls input/output operations at one or more devices.

data entry panel. A panel in which the user communicates with the system by filling in one or more fields. See also *panel* and *selection panel.*

data management. A major function of the operating system. It involves organizing, storing, locating, and retrieving data.

data processing system. A set of hardware and software that performs five functions–input, processing, storage, output, and control.

For a *local data processing system,* all five functions are done at the same location.

For a *remote data processing system,* certain portions of the input and output functions are at different places and are connected by transmission facilities.

device address. The identification of an input/output device by its channel and unit number.

Device Support Facilities. A utility program for performing operations on disk volumes so that they can be accessed by programs running under VSE. Examples of these operations are initializing a disk volume and assigning an alternate track.

dialog. For VSE/SP, a set of panels that can be used to complete a specific data processing task (defining a file, for example).

*** direct access.** The facility to obtain data from a storage device, or to enter data into a storage device in such a way that the process depends only on the location of that data and not on a reference to data previously accessed.

See also *sequential access.*

disk device. A storage device in which the access time is effectively independent of the location of the data. *Direct Access Storage Device (DASD)* is often used synonymously for disk device.

display station. See *terminal.*

distribution tape. A magnetic tape that contains an IBM program product like VSE/SP. This tape is shipped to the customer for program installation.

DITTO. See *VSE/DITTO.*

domain. (1) In a network, the resources that are under control of one or more associated host processors. (2) The network resources that are under the control of a particular system services control point (SSCP).

DOS/VS. (Disk Operating System/Virtual Storage) See *VSE.*

*** dump.** (1) Data that has been dumped. (2) To write the contents of a storage, or of part of a storage, usually from an internal storage to an external medium, for a specific purpose, such as to allow other use of the storage, as a safeguard against faults or errors, or in connection with debugging.

EREP. (Environmental Recording, Editing and Printing Program) A service aid of VSE/Advanced Functions.

Whenever a hardware error occurs, VSE/SP writes information about the error into a system recorder file. Through EREP, both summarized and detailed reports about this file's contents can be printed.

external storage. Storage that is not part of the processing unit (storage on disk, for example).

FBA disk device. (Fixed Block Architecture disk device) A disk storage device on which storage is allocated by blocks of fixed size. Contrast with *CKD disk device.*

FCOPY. See *VSE/FCOPY.*

*** file.** (1) A set of related records that are treated as a unit. Also known as a *data set.*

*** hardware.** (1) Physical equipment used in data processing, as opposed to computer programs, procedures, rules, and associated documentation. Contrast with *software.*

host processor. (1) In a network, the processor in which the access method for the network resides. (2) In an SNA network, the processor that contains a system services control point (SSCP).

ICA. (Integrated Communication Adapter) A hardware feature of IBM 4300 processors that permits telecommunication lines to be attached to these processors.

ICCF. See *VSE/ICCF.*

interactive. Pertaining to an application in which each entry causes a response from a system or program, as in an inquiry system or an airline reservation system. An interactive system may be conversational, implying a continuous dialog between the user and the system.

*** I/O.** (Input/Output) (1) Pertaining to a device or to a channel that may be involved in an input process, and, at a different time, in an output process. (2) Pertaining to a device whose parts can be performing an input process and an output process at the same time. (3) Pertaining to either input or output, or both.

*** I/O device.** A device in a data processing system by which data may be entered into the system, received from the system, or both.

IPL. (Initial Program Load) The initialization procedure that causes an operating system to begin operation. (2) The process by which a configuration image is loaded into storage at the beginning of a work day or after a system malfunction.

JCL. (Job Control Language) A control language that can be used to: (a) identify a job to an operating system and (b) describe that job's requirements.

JES. (Job Entry Subsystem) A subsystem for use under OS/VS1 or MVS/SP.

job. (1) A set of data that completely defines a unit of work for a computer. A job usually includes all necessary computer programs, linkages, files, and instructions to the operating system. (2) The actual processing of a unit of work by a computer.

*** job stream.** The sequence of representations of jobs to be submitted to an operating system. Synonymous with *input stream* and *run stream.*

library. A collection of data elements on disk to which the system has quick access. These elements (programs or dumps, for example) are maintained by system services.

VSE/SP has two main types of libraries, VSE libraries and ICCF libraries.

licensed program. Any separately priced program that bears an IBM copyright and is offered to customers under the terms and conditions of the Agreement for IBM Licensed Programs. Includes Program Products (PPs), Industry Application Programs (IAPs), Field-Developed Programs (FDPs), Installed User Programs (IUPs), and Programming RPQs (PRPQs).

line. See *link connection.*

link connection. A communication line is the physical medium of transmission (a telephone line, for example). A link connection includes the physical medium of transmission, the protocol, and associated devices and programming. It is both physical and logical.

megabyte. Roughly equal to 1 million bytes. A byte is the space required to represent one character.

member. A named set of one or more records in a library.

MSHP. (Maintain System History Program) A program used for automating and controlling various installation, tailoring, and service activities for a VSE system.

MVS/SP. (Multiple Virtual Storage/System Product) A program product that is an extension of OS/VS2.

network. (1) * An interconnected group of nodes. (2) The assembly of equipment through which connections are made between data stations.

node. In SNA, a junction point in a network that is represented by a physical unit. A node contains network addressable units.

object module. A program unit that is the output of an assembler or a compiler and is suitable for input to the linkage editor. Contrast with *source program.*

OLTEP. See *VSE/OLTEP.*

online. (1) Pertaining to a user's ability to interact with a computer. (2) Pertaining to a user's access to a computer via a display station. (3) * Pertaining to the operation of a functional unit that is under the continual control of a computer. The term is also used to describe a user's access to a computer via a display station.

online application. A set of programs that normally is used by people at display stations (an application that processes airline reservations, for example).

When an online application is active, it waits for data to be sent to it. Once input arrives, it processes it and sends a response to the display station or to another device.

online processing. Processing by which the input data enters the computer directly from a display station and the output data is transmitted directly to the display station.

*** operating system.** (1) Software that controls the processing of computer programs and that may provide scheduling, debugging, input/output control, accounting, compilation, storage assignment, data management, and related services.

operator console. See *system console.*

*** output.** (1) Pertaining to a device, process, or channel involved in an output process, or to the data or states involved in an output process. See *I/O.*

packet. A sequence of binary digits including data and call control signals that is sent as a composite whole. The data, call control signals, and possibly error control information, are arranged in a specific format.

packet switching. The processing of routing and transferring data by means of addressed packets so that a channel is occupied only during the transmission of a packet. Upon completion of the transmission, the channel is made available for the transfer of other packets.

panel. In VSE/SP, the complete set of information that currently is shown on a display station screen. Each panel of the VSE/SP Interactive Interface is like a different page in a book; that is, you go backward and forward through panels, just like you do when turning a book's pages. See also *selection panel* and *data entry panel.*

partition. A division of the address space that is available for program execution. The supervisor control program, however, does not run in this space.

password. (1) A unique string of characters that a program, computer operator, or user must supply to meet security requirements before gaining access to data. (2) In systems with time sharing, a one-character to eight-character symbol that the user may be required to supply at the time he logs on to the system. The password is confidential, as opposed to the user identification.

phase. The smallest unit of executable code that can be referred to in a program library.

POWER. See *VSE/POWER.*

pregenerated operating system. An operating system like VSE/SP which is shipped by IBM mainly in object code. In such a system, definitions for key functions such as:

- Size of the main control program,
- Organization and size of libraries, and
- Required system areas on disk

are done by IBM, not the customer. Because of this, the customer does not need the source code necessary to generate an operating system.

printer. A device that writes output data from a system on paper or similar media.

processing. The performance of logical operations and calculations on data, including the temporary retention of data in processor storage while the data is being operated upon.

processor storage. The storage contained in a processing unit. Synonymous with *real storage.*

program. (1) * To design, write, and test programs. (2) A set of instructions that a machine can interpret and execute.

program product. A licensed IBM program that performs a function or set of functions for the user. It interacts with and relies upon either the hardware or other program products of IBM.

PTF. (Program Temporary Fix) A temporary solution or by-pass of a problem caused by a defect in a current, unaltered release of an IBM program.

queue. (1) A line or list formed by items in a system that are waiting for service (for example, tasks to be performed or messages to be transmitted in a message-switching system). (2) To arrange in, or form, a queue.

*** read.** To acquire or interpret data from a storage device, from a data medium, or from another source.

real storage. See *processor storage.*

*** record.** A collection of related data or words, treated as a unit (for example, in stock control, each invoice could constitute one record).

restore. To load a copy of: (a) an operating system or (b) user data into storage. The copy can be a backup copy that replaces destroyed data, or it can be a newly acquired copy that replaces outdated data.

RJE. (Remote Job Entry) Submission of jobs through an input unit that has access to a computer through a data link.

RSCS. (Remote Spooling Communications Subsystem) The component of VM/SP that transfers spool files between users, remote stations, and local and remote batch systems.

*** run.** (1) A single performance of one or more jobs. (2) A single, continuous performance of a computer program or routine.

SDLC. (Synchronous Data Link Control) A discipline for managing synchronous, code-transparent, serial-by-bit information transfer over a link connection. Transmission exchanges may be duplex or half-duplex over switched or non-switched links. The configuration of the link connection may be point-to-point, multipoint, or loop.

selection panel. A displayed list of functions (options) that are available for doing work. A display station user can select an option from a selection panel do a specific task. See also *panel* and *data entry panel.*

sequential access. An access mode in which records are read from or written into a file in such a way that each successive access to the file refers to the next record in the file.

shared spooling. A function of VSE/POWER that permits sharing of the VSE/POWER account file, data file, and queue file among several systems with VSE/POWER.

SNA. (Systems Network Architecture) A method for formally defining the responsibilities of components of an IBM communications network.

SNA network. The part of a user-application network that conforms to the formats and protocols of Systems Network Architecture. It enables reliable transfer of data among end users and provides protocols for controlling the resources of various network configurations. The SNA network consists of network addressable units (NAUs), boundary function components, and the path control network.

*** software.** (1) Programs, procedures, rules, and associated documentation for the operation of a computer system. Contrast with *hardware.*

*** source program.** A computer program expressed in a source language. Contrast with *object module.*

spooling. (1) * The use of external storage as buffer storage to reduce processing delays when transferring data between peripheral equipment and a processor. (2) The reading of input data streams and the writing of output data streams on external storage devices (concurrently with job processing) in a format convenient for later processing or output operations.

*** storage.** (1) The action of entering data into a storage device. (2) The retention of data in a storage device. (3) A device, or part of a device, that can retain data. (4) A storage device.

*** storage device.** A functional unit into which data can be entered, in which it can be retained, and from which it can be retrieved.

subsystem. A secondary or subordinate system or programming support, usually capable of operating either independently of or together with the operating system.

supervisor control program. In a VSE-based system, the program that coordinates the use of resources and maintains the flow of processor operations.

SVA. (Shared Virtual Area) An area located in the high address range of virtual storage. It contains, primarily, phases that can be shared between partitions.

*** system console.** A functional unit containing devices that are used for communication between a computer operator and a data processing system.

System IPO/E. (System Installation Productivity Option/Extended) For VSE, a set of products and a series of optional features designed to aid in system installation and maintenance.

system libraries. In VSE/SP, a set of libraries in which the various parts of the operating system are stored.

telecommunication. The transmission of data between computer systems and between such a system and remote devices.

terminal. (1) * A point in a system or communication network at which data can either enter or leave. (2) A device, usually equipped with a keyboard and a screen, capable of sending and receiving information over a communication channel.

Display stations and *display terminals* are terminals with a keyboard and screen.

transaction. In CICS/DOS/VS, an application program (or programs) that can be used by a display station operator. A given transaction can be used concurrently by one or more operators.

A *task* is the execution of a transaction for a particular operator. A given task can relate only to one operator.

utility program. (1) A program that assists in the use of a computing system without contributing directly to the control of the system or the production of results. (2) A program that performs an everyday task such as copying data from one storage device to another. (3) * Synonym for *service program.*

virtual address. An address that refers to a location in virtual storage. It is translated by the system to a processor storage address when the information stored at the virtual address is to be used.

*** virtual storage.** The notation of storage space that may be regarded as addressable main storage by the user of a computer system in which virtual addresses are mapped into real addresses. The size of virtual storage is limited by the addressing scheme of the computer system and by the amount of available external storage, not by the actual size of processor storage.

VM/SP. (Virtual Machine/System Product) A program product that manages the resources of a single computer so that multiple computing systems appear to exist. Each virtual machine is the functional equivalent of a "real" machine.

volume. A disk pack, tape reel, or diskette (pack).

VSAM. See *VSE/VSAM.*

VSE. (Virtual Storage Extended) An operating system that is an extension of Disk Operating System/Virtual Storage.

A VSE system consists of: (a) licensed VSE/Advanced Functions support and (b) any IBM-supplied and user-written programs that are required to meet an installation's data processing needs. VSE and the hardware controlled by it form a complete computing facility.

VSE/Advanced Functions. The basic operating system support needed at a VSE-controlled installation.

VSE/DITTO. (VSE/Data Interfile Transfer, Testing and Operations Utility) An IBM program product that provides file-to-file services for card I/O, magnetic tape, and disk devices.

VSE/FCOPY. (VSE/Fast Copy Data Set Program) This program is designed for: (a) fast copy data operations from disk to disk and (b) dump/restore operations via an intermediate dump file on magnetic tape or disk.

VSE/ICCF. (VSE/Interactive Computing and Control Facility) An IBM program product that makes the services of a VSE-controlled computing system available to authorized display station users. Availability of services is on a time-shared basis, and display stations must be linked to the system's central processor.

VSE/OLTEP. (VSE/Online Test Executive Program) An IBM program for managing the online tests that are available for device preventive maintenance and service. Normally, only IBM service personnel use this program.

VSE/POWER. (VSE/Priority Output Writers, Execution Processors, and Input Readers) An IBM program product primarily used for the spooling of input and output. VSE/POWER's networking functions enable a VSE/SP system to exchange files with or run jobs on another remote processor.

VSE/VSAM. (VSE/Virtual Storage Access Method) An access method for indexed or sequential processing of fixed and variable length records on direct access devices.

V

X

2

3

4

8

READER'S
COMMENT
FORM

VSE/System Package
General Information
Order No. GC33-6176-0

This form may be used to communicate your views about this publication. They will be sent to the author's department for whatever review and action, if any, is deemed appropriate. Comments may be written in your own language; use of English is not required.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation whatever. You may, of course, continue to use the information you supply.

Note: *Copies of IBM publications are not stocked at the location to which this form is addressed. Please direct any requests for copies of publications, or for assistance in using your IBM system, to your IBM representative or to the IBM branch office serving your locality.*

Possible topics for comments are:

Clarity Accuracy Completeness Organization Coding Retrieval Legibility

If you wish a reply, give your name and mailing address:

_____

_____

_____

What is your occupation? _____

Number of latest Newsletter associated with this publication: _____

Thank you for your cooperation. No postage stamp is necessary if mailed in the U.S.A. (Elsewhere, an IBM office or representative will be happy to forward your comments or you may mail directly to the address in the Edition Notice on the back of the title page.

Note: Staples can cause problems with automated mail sorting equipment.
Please use pressure sensitive or other gummed tape to seal this form.

GC33-6176-0

Reader's Comment Form

Fold And Tape | Please Do Not Staple | Fold And Tape

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 40 ARMONK, N.Y.

POSTAGE WILL BE PAID BY ADDRESSEE:

International Business Machines Corporation
Department 6R1BP
180 Kost Road
Mechanicsburg, PA 17055

Fold And Tape | Please Do Not Staple | Fold And Tape

Cut or Fold Along Line

VSE/System Package General Information (File No. S370/4300-20) Printed in U.S.A. GC33-6176-0

GC33-6176-0
File Number S370/4300-20
Printed in U.S.A.

GC33-6176-0
File Number S370/4300-20
Printed in U.S.A.